

AI INTEGRATED LEARNING PROJECT PROJECT REPORT

GROUP 4

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ABSTRACT

Objectives, methodology, results and conclusions (150 to 300 words)

This project addresses the growing disruption caused by artificial intelligence (AI) in the labour market, particularly the risk of job displacement and the need for continuous upskilling. Focusing on the Singapore context, where many professionals express concern about remaining relevant, the team aims to develop an AI-powered career development platform that supports both job matching and structured upskilling. Unlike existing solutions such as *LinkedIn*, *Glassdoor*, *JobStreet*, and *MyCareersFuture*—which primarily focus on job applications or basic recommendations—the proposed system seeks to provide personalised, data-driven career pathways and learning plans tailored to individual users.

The project adopts a three-phase development approach: problem definition and research, prototyping using low-code/no-code tools, and refinement into a functional minimum viable product (MVP). Various AI tools were leveraged, including *ChatGPT* for ideation, *Perplexity* for research, *Figma Make* for design, *Lovable.dev* for rapid prototyping, and *Claude Code* for full-stack development. A key insight was the importance of human-led conceptual clarity and precise prompting in achieving effective AI outputs. While tools like *Lovable.dev* enabled quick prototyping, they proved inadequate for complex logic and scalability, leading to a transition toward more robust coding solutions.

The final MVP is a full-stack application that allows users to upload CVs, extract and verify skills, analyse career readiness, identify skill gaps, and receive personalised career pathways and course recommendations. Despite these achievements, limitations remain, particularly in employer-side functionality, verification systems, and trust scoring mechanisms.

Overall, the project demonstrates that AI can significantly enhance career planning and workforce adaptability when combined with strong human oversight. Future improvements

will focus on expanding platform capabilities, strengthening verification processes, and enhancing real-world applicability.

BACKGROUND

Problem statement, objectives, and scope of the project

With the growing prevalence of AI and its attendant use in professional settings, there is a real and present concern that traditional jobs performed by humans are now increasingly under threat. According to a 2024 study published by the McKinsey Global Institute, labour markets in Europe and the United States could see the automation of almost half of current hours worked by 2035, accelerated by the use of generative AI. Just most recently in 2026, the leading American AI firm Anthropic, published a study on the *observed exposure* of various professions to AI, i.e. the AI job displacement risk. Across a wide range of occupational categories, the theoretical possibility that AI could replace job tasks was high, especially in white-collared professions such as management, legal, business and finance.

It is therefore unsurprising that many workers in Singapore are deeply concerned about the risk of being replaced by AI, with their relevance eroded and livelihoods threatened. A survey conducted by the National Trades Union Congress (NTUC), found that more than half of professionals, managers and executives (PMEs) in Singapore feel the need to upskill to remain relevant amid disruption caused by AI.

As AI increasingly proliferates into everyday life and work, the consequent disruption in the job market is of growing concern both to the country at large, and the individual job-seeker as well. At the macro-level, Singapore needs its workforce equipped with the relevant AI skills and matched to the appropriate jobs in order for the economy to remain robust and competitive. Failure to do so risks falling behind other economies, with attendant negative impact on GDP

and jobs. At the micro-level, the individual worker will undoubtedly be concerned that AI has replaced his job, and his current repertoire of skills now irrelevant in the job market.

This project therefore aims to address these problems by providing a useful job-hunting and upskilling tool for the Singaporean worker. The final objective is to build a solution prototype that leverages AI to provide two recommendations to the individual worker, namely (1) best-fit available jobs based on current skills; and (2) upskilling options based on job aspirations. The recommendations will be data-driven, and made based on the two pillars of demand and supply data. On the demand side, this includes data of job aspirations (employee demand) and job listings (employer demand). On the supply side, data of worker skills (trainee supply) and upskilling options (trainer supply) will be used.

PROJECT LIMITATIONS

Identify gaps or limitations in existing solutions/approaches

Demand for job-matching solutions have always been present; as such, solutions to meet this demand abound in the market. Examples include private-sector platforms such as the employment-oriented social networking service *LinkedIn*, company review platform *Glassdoor*, and the online employment marketplace *Jobstreet*. These solutions, while immensely popular and hence used by large volumes of job-seekers, are designed for specific, targeted purposes. *LinkedIn* specialises in networking and building of a personal professional brand for the job-seeker. *Glassdoor* utilises crowd-sourcing to offer research, information and insights on companies for the job-seeker. *Jobstreet* facilitates applications and link-ups at mass between the job-seeker and potential employers. As these solutions have different features, many job-seekers use them as complementary tools in their job search journeys.

Notwithstanding, these private solutions overwhelmingly focus on helping the job-seeker apply for current jobs. They do not specialise in helping the job-seeker become a better candidate for

jobs that the latter aspires to. In the areas of skill analysis, upskilling recommendations, and career planning, these solutions perform poorly.

Some of these limitations in the market are being addressed by government-backed solutions. For example, *MyCareersFuture*, Singapore's national, government-backed job and career platform, seeks to match job-seekers to jobs based on skills, competencies and experience. It also recommends courses to address skill gaps, primarily via *SkillsFuture* courses and government programmes. However, while *MyCareersFuture* performs the role of profile analysis, target job mapping, skill gap analysis, and upskilling recommendations, it does not go further to provide a structured learning pathway (i.e. a step-by-step sequential roadmap). As a result, it has limited personalisation for the individual job-seeker. With the algorithm behind the platform mostly rule-based and framework-driven, it is not yet fully AI-adaptive. As a result, what ensues is a highly impersonal career platform that simply provides available course offerings, and not one which selects and recommends upskilling options based on whatever that maximises the chance of success for the individual job-seeker, as a dedicated human career coach would.

This project is cognisant of the various offerings on the market, both via private solutions and government-backed platforms. The focus is on addressing the gaps, so as to be of greater utility to the worried job-seeker. In addition to current job matching, this project aims to use AI to provide personalised, structured career upskilling pathways to guide the job-seeker through the entire job search process. The goal is to come up with a career planning buddy that can not only accompany the job-seeker every step of the way, but also provide career advice that is both data-driven and assuring.

TOOLS AND TECHNOLOGIES

Description of tools, technologies, or frameworks used, if any

The project team used a myriad of AI tools in our research and work to develop our own platform.

This included *ChatGPT*, an AI large language model (LLM) chatbot from OpenAI, which served to help the team with first-cut suggestions for writing, coding, and research. Fact-checking and cross references for sources was done with *Perplexity*, which acted as an AI-powered search engine that pulled web data with verifiable sources.

For developing functional prototypes and interactive user interface (UI), the team used *Figma Make*, an AI-driven, prompt-to-app feature within *Figma*, itself a collaborative design platform for building digital products. We also relied on AI-powered platforms such as *Lovable.dev*, a no-code tool that enables the user to build apps without deep coding skills, and *Claude Code*, a coding tool that reads the entire codebase and suggests code refinements.

PLANNING PHASES

Project planning and development phases

Project planning and development was done in three phases.

In the first phase, the project team focused on sharpening the problem statement. This included data collection and market research, where incumbent products were studied for their features and limitations, so that we could be targeted in solving a real gap that was hitherto unmet by the market. We also interviewed peers and colleagues, so as to obtain a wide range of perspectives and experiences beyond our own. It was at this stage where we landed on the need to provide a job-matching solution that is structured, personalised, and focused on effective upskilling for the individual job-seeker.

In the second phase, we focused on experimenting with ideas and developing prototypes using low-code/no-code platforms. This was when our ideas on what our platform should and could do started to take tangible shape. The team took divergent approaches with respect to

developing prototypes; the idea was to try out various tools and options, before converging again to develop and refine the final product.

In the third and final phase, the project team converged on a solution, and focused on refining the code, debugging, as well as refining the UI and user experience (UX). To make sure that the solution was user-friendly and served to achieve what it set out to do, we also conducted extensive peer-testing, obtained feedbacks, and used it for subsequent improvements.

STEP-BY-STEP EXECUTION

Detailed account of how the project was built or executed

Across the second and third phases, the project was executed mainly using the three AI tools of *Figma Make*, *Lovable.dev*, and *Claude Code* sequentially. *Figma Make* was the main tool used to derive the human-centric design of our prototype as we envisaged. *Lovable.dev* was the no-code tool used to rapidly translate the design to a basic prototype. Finally, *Claude Code* was used to build the minimum viable product (MVP) via coding, based on the initial basic prototype.

Human-Centric Design

Following group alignment on project goals, ideation and concept development were conducted through *Perplexity*, using MyCareersFuture as the primary benchmark. A three-page, user-first interface was progressively defined around Past, Present and Future, structured against Singapore's four SkillsFuture priority economies: Care, Digital, Green, and Industry 4.0. User flow, colour strategy, verification architecture, and the radar chart system were all resolved at this stage before a structured prompt was extracted from *Perplexity* and submitted to *Figma Make*. This sequencing was deliberate: the quality of AI-generated output is directly proportional to the clarity of the input, and that clarity was only achievable because the design thinking had already been done upstream.

The *Perplexity-to-Figma-Make* workflow functions best as a two-stage process: ideation first, generation second. Attempting both simultaneously produces weaker results because generation surfaces decisions that should already be made. Throughout this session, prompt length and effectiveness were inversely correlated, with the shortest, most directive prompts consistently landing first time. Design judgment and conceptual clarity remain the defining human contributions to any AI-assisted process.

Short, technically precise prompts executed in a single pass, while prompts that responded to failed outputs emotionally rather than technically required multiple correction cycles. The logo task, calling for the letter S to simultaneously function as an upward-pointing arrow, proved unresolvable through prompting alone and was reverted to a wordmark, highlighting that Figma Make handles layout logic well but struggles with compositionally specific graphic tasks. A structural error also surfaced when interactivity was introduced: screen files were importing components using incorrect relative paths, an inconsistency invisible in static mockups but breaking live code, an error that recurred when outputs were moved into *Lovable.dev* for development.

From Design to Rapid Prototyping

The team experimented with the use of low-code/no-code tooling with *Lovable.dev* because it offered a fast way to turn our ideas into a working prototype without needing to build everything from scratch. The ability to generate a functional application for quick testing of the visual UI concept built using *Figma Make*, was fundamental in bridging the gap between design and implementation early on.

The team researched various prompts to use in the development of the prototype, and leveraged on ChatGPT to think through and refine a “master prompt” that could guide *Lovable.dev* in

generating a coherent first version of the platform. Once ready, the prompt ran together with the UI reference PDF, giving us a starting point to conceptualise the layout and basic structure.

As we moved beyond the initial prototype, however, the limitations started to show. While *Lovable.dev* was strong at quickly scaffolding an application, it struggled with more complex logic and consistency across workflows. We found ourselves spending a significant amount of time iterating on prompts just to correct behaviours that would normally be more directly controlled in a traditional development setup. Debugging was also less straightforward, since issues were often tied to how the AI interpreted prompts rather than clearly traceable code paths.

We tested the system by uploading a sample CV to validate the ETL process, which exposed further issues in how data was being parsed and structured. The outputs also became unreliable over time with hallucinated or inconsistent data appearing. While more tightly controlled prompts were introduced to reduce the issues, it became clear that we were working around the tool rather than with it.

At the same time, as we tested the overall UX, inconsistency of the functions, bugs and edge cases kept surfacing, and fixing them through prompt iteration became increasingly inefficient. The more we tried to refine the system, the more constrained we were by the abstraction layer.

Eventually, we decided to scrap this approach and move to *Claude Code*, which was gaining popularity as an autonomous “agentic” coding teammate.

MPV Development and Testing

The main reason was control; *Claude Code* allowed us to work closer to actual code, making it easier to define logic precisely, debug issues properly, and scale the application without fighting the tooling. In hindsight, *Lovable.dev* was useful for rapid exploration and early

prototyping, but it wasn't the right fit for building a more robust and reliable product. *Lovable.dev*'s strength is speed: you describe what you want and get a working UI shell in minutes. The tradeoff is that it generates opinionated, sometimes bloated code and hits a wall the moment you need real backend logic, database design, or AI integrations beyond simple API calls. The switch happened when the project needed real engineering. The first substantive commit dropped a full stack in one go: Express/Node.js backend, SQLite via better-sqlite3, JWT auth, PDF/DOCX CV parsing with mammoth and pdf-parse, and AI-powered skill extraction piped through a local Ollama model (qwen2.5:1.5b). From there, *Claude Code* iterated commit by commit, migrating from Ollama to the Anthropic API for better output quality, adding SerpAPI for live job listings and real course discovery, hardening security (input validation, JWT guards, rate limiting), fixing role readiness accuracy, and tuning every AI prompt for structured JSON output.

Lovable excels at visual scaffolding and is ideal for non-engineers to validate a concept fast. *Claude Code* operates at the engineering level, it reads, edits, and reasons about actual files, catches security issues, fixes logic bugs, and iterates on production concerns like prompt reliability, API fallbacks, and data accuracy. The pivot point was the moment the product needed to be real: live data, real AI responses, accurate calculations, and deployable infrastructure. That's where *Lovable.dev* hands off and *Claude Code* takes over.

SCREENSHOTS AND OUTPUTS

Visual representation of the project (if applicable)

The following visuals were developed using various AI tools and platforms.

Perplexity:

With the increasing prevalence of AI technologies, many Singaporeans are worried about job security. Firstly, there is concern that AI will replace many traditional jobs. Secondly, there is also uncertainty with regard to the type of AI-related skills required for workers to remain relevant.

This project will explore how this can be addressed through the building of a solution prototype. Beyond the micro-level concerns of the individual worker, the envisaged better matching of workers to jobs, and of up-skilling courses to workers will also strengthen the overall workforce and the state of the economy. The job market is undergoing a great disruption, with the emergence of AI technologies replacing many traditional jobs and requiring new skills for others. Many employees are concerned about their jobs, and the skills they require to keep these jobs.

Project aims to build a solution prototype and leverage AI tools to prepare the "common Singaporean" well for the dynamic job market.

This will be done by matching demand with supply data, and providing recommendations for the target audience.

Demand – job aspirations, skills-in-demand
Supply – job listings, courses-on-offer

Identify public data sources for jobs (e.g., Glassdoor, LinkedIn, Jobstreet DB) and training courses (e.g., Coursera, Udemy) to train our models

Explore and adopt use of low-code/no-code platforms (e.g. Genspark, Manus, DeepAgent) to design a prototype

Develop mapping and recommendation engine to analyse gaps between skills and job descriptions and make recommendations on courses to complete as part of career pathway.

I would like to contribute to the group project in terms of humanizing the job search application tool with simple UI UX studies of better ways to visualise job searchers' credentials, skills, experiences and intangibles. Ideally it would be an interface that tracks and updates in real time, the prospective employees' upskilling, available skills and matches up to date with job openings. It should be an interface similar to dating apps that allow prospective employers and employees match and see relevant information. the vibe should be to have a balance of power on both sides of the hiring process.

Show tabs <-

Completed 2 steps >

You can frame your contribution as designing a "human-first, dating-app-style" interface layer for the prototype, showing how Singaporean workers and employers meet each other halfway in an AI-driven labour market. [Tech 14](#)

1. Clarify your role in the project

Position your contribution as three concrete deliverables:

- A UX concept for a two-sided interface (workers and employers) that sits on top of the team's data and recommendation engine.
- Interaction flows that visualise evolving skills, course completions and job matches in real time, using Singapore's existing ecosystem (SkillsFuture, MyCareersFuture, etc.) as context. [Stratistics 12](#)
- UX principles that keep power balanced f'' → a dating app) so neither side dominates the interaction. [14](#)

now the 3 slides on each side should be summarised visually in an infographic like the Japanese style star chart of power levels e.g. relevant experience, credentials, skills, projects etc.

• Visualizing the 6 slides as Japanese-style star chart infographics summarizing key attributes like exper... >



Think of this as two mirrored "power star" infographics, each compressing the 3 past-present-future slides into one radar chart.

Below is a concise spec you can drop into Figma.

1. Talent Star (Job Seeker)

Shape: 6-8-axis radar chart / spider chart showing overall "power level". [springhides 12](#)

Axes (example 8-point star)

- Relevant experience (years & depth)
- Credentials (certs, degrees, micro-credentials)
- Core human skills (communication, empathy, leadership)
- AI / digital skills (prompting, data tools, basic automation) [original 11](#)
- Domain expertise (industry knowledge)
- Projects & portfolio (shipped work, case studies)
- Learning momentum (courses in progress, recency of upskilling) [14slides 11](#)
- Values alignment (fit with preferred cultures/ways of working)

Past-Present-Future layering

Use 3 concentric outlines on the same star:

Integrity Architecture

TEXT

CV Upload → Auto-parse →

Multi-source verification:

├─ LinkedIn API ☒
├─ Email domain ☒
├─ Cert provider API ☒
└─ Manual (● 30% weight)

↓

Profile Score = 70% skills + 30% verification

Anti-Abuse Measures:

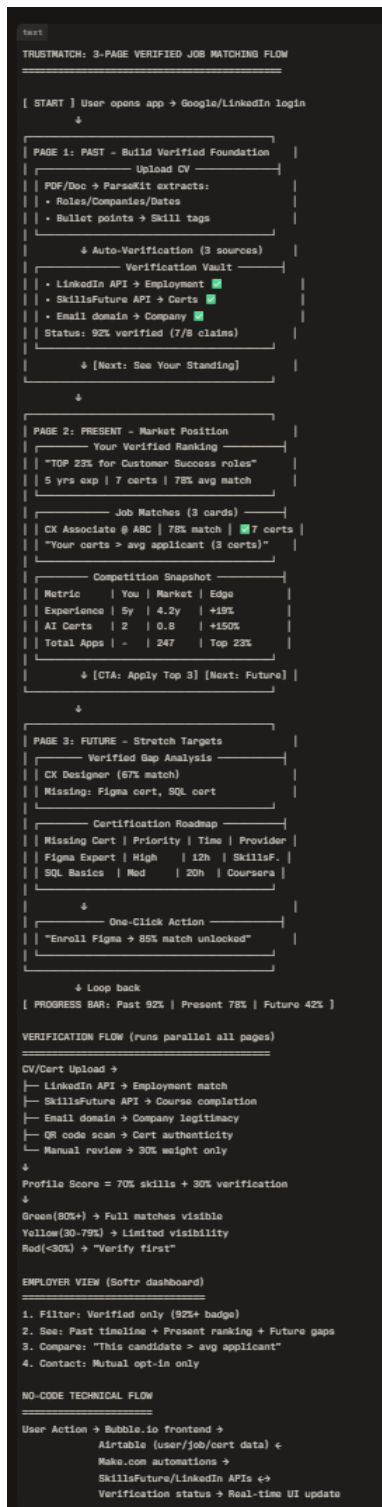
- Verification % displayed everywhere
- Unverified claims shown in gray (30% weight)
- Employers see verification status before matching
- Live decay: Certs >3yrs old need refresh

Progress Bar: Past 92% verified | Present 78% | Future 42%

This creates a trust flywheel: verified profiles get better matches → employers prefer verified talent → incentive to verify grows.

📌 ⬇️ 🗑️ 📄

🔖 🗨️ ...



Figma Make

Prompt from Perplexity:

Paste this into Figma's AI / wireframe assistant:

Design a mobile app prototype (iOS width) for a 3-step, human-first job matching app called "TrustMatch". Use simple, minimal components and a 3-page structure:

Screen 1 – PAST (Verified Foundation)

Goal: capture and visualise background.

Layout:

Top app bar:

Left: "TrustMatch" wordmark

Right: circular avatar + green verification shield icon

Progress indicator under app bar: 3 steps labeled "Past · Present · Future", with "Past" highlighted.

Main content:

Card 1: "Upload CV & Certificates"

Drag-and-drop zone + "Upload file" button

Small text: "PDF/DOC, auto-parse roles & education"

Card 2: "Verified Experience"

Vertical mini timeline of 3 roles (title, company, years)

Each role has a small status pill: "Verified / Pending"

Card 3: "Verification Score"

Large percentage (e.g., "92% Verified")

Horizontal progress bar

Three tags: "Education ✓", "Experience ✓", "Credentials ✓"

Bottom fixed CTA: full-width button "Continue to Present"

Style: light mode, white cards on soft grey background, primary accent: cool blue.

Screen 2 – PRESENT (Market Position)

Goal: show current standing, skills, and matches.

Layout:

Reasoning >

I'll build a clean, mobile-first job matching app with three progressive screens. Let me start by checking the current project structure and then create the TrustMatch app.

Worked with 8 files ▾

Read 2 files

Wrote routes.ts

Wrote Layout.tsx

Wrote PastScreen.tsx

Wrote PresentScreen.tsx

Wrote FutureScreen.tsx

Wrote App.tsx

Perfect! I've created TrustMatch, a clean mobile-first job matching app with three progressive screens. The app features a verification-focused "Past" screen with document upload and timeline, a "Present" screen showcasing current position with a radar chart comparing skills, and a "Future" screen with aspirational roles and skill gaps with recommended courses. Each screen has intuitive navigation, a consistent header with progress tracking, and uses the specified color scheme (blue for past, green for matches, orange for future actions).

Suggestions:

- Add actual file upload functionality with drag-and-drop handling
- Integrate animations between screen transitions using Motion
- Connect the "Apply" buttons to a job application flow

TrustMatch mobile app prototype

Version 1

...

Make the color scheme orange monochromatic

Reasoning >

Worked with 7 files >

Perfect! I've transformed the entire app to use an orange monochromatic color scheme. The changes include:

- **Layout component:** Progress indicators and avatar badge changed from blue to orange
- **Past screen:** All verification elements, profile picture edit button, and verification badges now use orange tones
- **Present screen:** Economy tags and CTAs updated to orange (keeping green for radar chart "you" data and match percentages for clarity)
- **Future screen:** Aspirational role tags and skill gap indicators changed to orange
- **Job Application screen:** Economy badges and info callouts updated to orange
- **Progress bars:** Updated the base Progress component to use orange colors throughout

The app now features a cohesive orange monochromatic design system while maintaining green accents for success states and positive metrics, ensuring good visual hierarchy and usability.

Change color scheme to orange

Version 7

...

1 edited file

Change color scheme to orange

Version 8

...

I need a sign up login screen with the same look and feel, it needs to be simple and effective for seamless transition to

S

Skillbridge

Your Career. Verified and Matched.

1 Verify Your Past

Build trust with verified credentials and experience

2 Match Your Present

Find roles across 4 priority economies that fit your skills

3 Shape Your Future

Bridge skill gaps with personalized learning pathways

Email Address

✉ sarah.chen@example.com

Password

🔒

Forgot password?

Sign In →

Don't have an account? Sign Up

Your Journey Ahead

1 Past

2 Present

3 Future

Make the screens transition by swiping left and right



Reasoning >

I'll implement swipe navigation between the screens. Let me first explore the current app structure to understand the routing setup.

Worked with 5 files >

Perfect! I've successfully implemented swipe navigation for the Skillbridge app. The screens now support:

1. **Swipe gestures:** Users can swipe left to go to the next screen (Past → Present → Future) and swipe right to go back to the previous screen
2. **Smooth transitions:** Each screen slides in from the appropriate direction with a spring animation
3. **Drag feedback:** As users drag, they see visual feedback before releasing to navigate
4. **Smart thresholds:** The swipe needs to exceed 50px or have a velocity of 500px/s to trigger navigation, preventing accidental swipes
5. **Boundary detection:** Swiping is disabled at the first screen (can't go back from Past) and last screen (can't go forward from Future)

The implementation uses Motion's drag functionality combined with AnimatePresence for smooth page transitions. The direction of the slide animation correctly matches the navigation direction - sliding left when moving forward and sliding right when going backward.

Add swipe transitions

Version 20



← Back



Figma Advanced Prototyping

SkillsFuture

🕒 12 hours 👥 2,340 students ⭐ 4.8★

Boost Your Match

67%

Current



78%

After Course

Improves matches for:

CX Designer (DIGITAL)	+11%
Healthcare Designer (CARE)	+8%
Climate UX Lead (GREEN)	+6%

What You'll Learn

- ✓ Master advanced prototyping techniques
- ✓ Build interactive, high-fidelity prototypes
- ✓ Implement animation and micro-interactions
- ✓ Create reusable component systems
- ✓ Present and test prototypes effectively

Course Schedule

1	Week 1 Fundamentals & Setup	3h
2	Week 2 Interactive Components	4h
3	Week 3 Advanced Animations	3h
4	Week 4 Final Project	2h

Course Details

Level	Intermediate
Duration	12 hours

Enroll Now

← Back

GREEN

Sustainability UX

GreenFuture Co

Salary: \$80,000 - \$105,000 Location: Singapore Your Match: 72%

Why You're a Good Match

- ✓ Verified 6+ years experience
- ✓ Strong human skills (Top 15%)
- ✓ Domain expertise in UX
- Leadership experience

Required Documents

CV / Resume	✓ Done
Portfolio	Upload
Certificates	✓ Done
Cover Letter	Upload

Application Details

Portfolio / Website Link

https://yourportfolio.com

Cover Letter

Tell us why you're interested in this role...

0 / 500 characters

Application Review

Your verified credentials will be automatically shared. Expect a response within 5-7 business days.

Submit Application

Skillbridge

JS

1

Past

2

Present

3

Future



Sarah Chen

Senior UX Designer

✓ 92% Verified

Upload CV & Certificates



Drag & drop files here

Upload file

PDF/DOC, auto-parse roles & education

Verified Experience

- Senior UX Designer
TechCorp
2022 - Present ✓ Verified
- UX Designer
StartupLab
2019 - 2022 ✓ Verified
- Junior Designer
CreativeHub
2017 - 2019 ⌚ Pending

Verification Score

92%

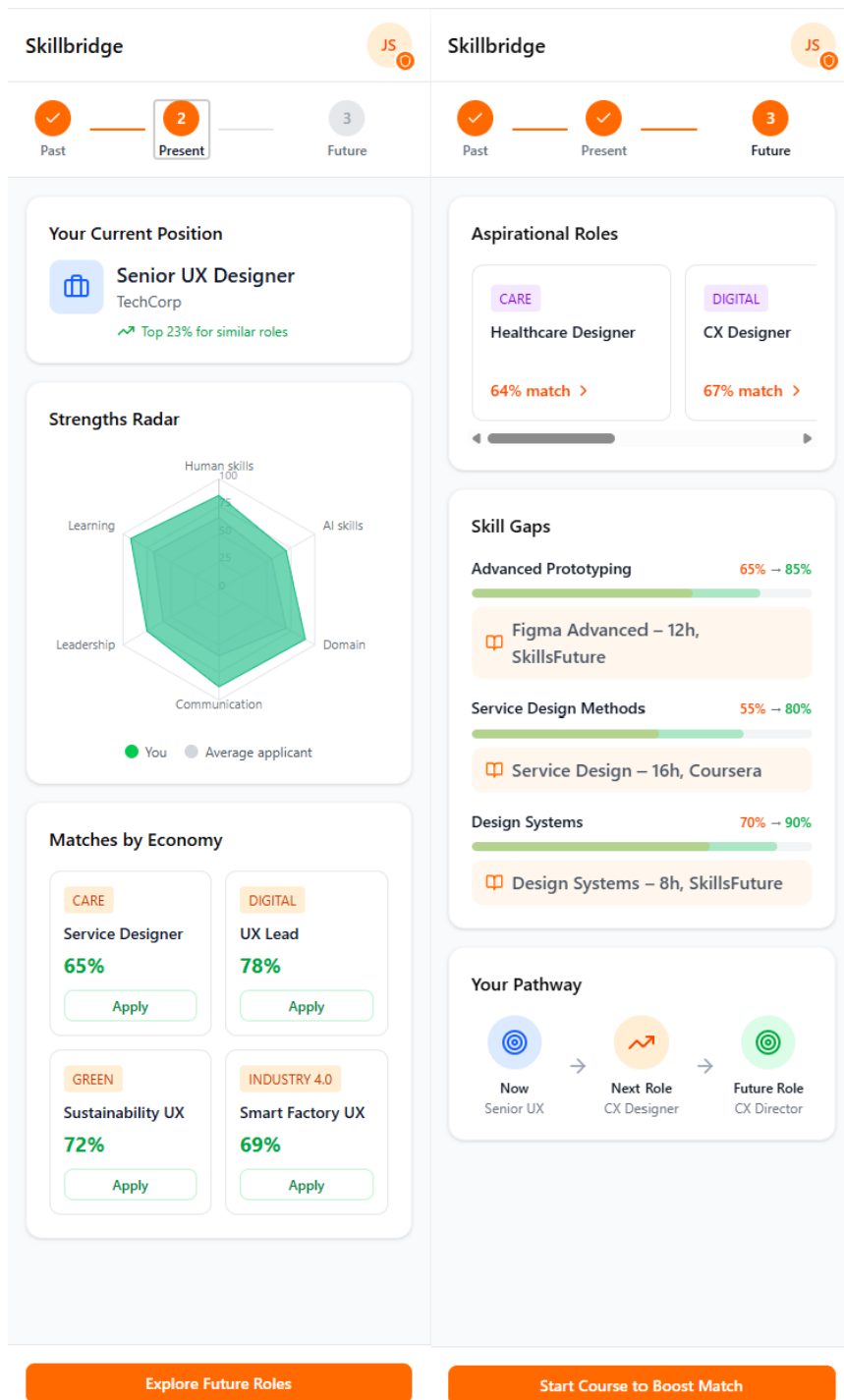
Verified

Education ✓

Experience ✓

Credentials ✓

Continue to Present





TrustMatch

AI-Powered Career Development

Welcome back

va.ng.2025@ipm.smu.edu.sg

.....

Sign In →

Don't have an account? [Sign up](#)

1
Past2
Present3
Future

ML

Mandy Lim

unable to verify at Daiichi Life Asia Pacific Pte. Ltd.

**Upload CV & Certificates**

PDF, DOC, DOCX up to 10MB

Mandy_CV (20251125).docx

Verified Experience**unable to verify**

Rohm Electronics Pte Ltd

unable to verify — unable to verify

Tap to verify

unable to verify

TT Global Pty Ltd

unable to verify — unable to verify

Tap to verify

the function

Daiichi Life Asia Pacific Pte. Ltd.

2023 — Present

Tap to verify

HR Business Partner

Mercedes-Benz Financial Services Singapore Ltd

2019 — 2023

Verified

the function

BMW Asia Pte Ltd

2015 — 2018

Tap to verify

CV
Ext



TrustMatch



1

Past

2

Present

3

Future

ML

Mandy Lim

unable to verify at Daiichi Life Asia Pacific Pte. Ltd.

Verify Experience



Job Title

Finance Executive

Company Name

Rohm Electronics

Start (MMM-YYYY)

Jun-2006

End (MMM-YYYY)

Jul-2008

Confirm the details are correct. Saving will mark this entry as verified.

Cancel

Verify & Save

the function

Daiichi Life Asia Pacific Pte. Ltd.

2023 — Present

Tap to verify

HR Business Partner

Mercedes-Benz Financial Services Singapore Ltd

2019 — 2023

Verified

the function

BMW Asia Pte Ltd

Tap to verify



Past



Present



Future

CURRENT POSITION

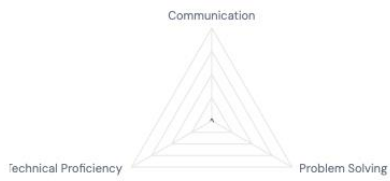
unable to verify

↗ Mandy Lim

Daiichi Life Asia Pacific Pte. Ltd.

Strengths Radar

— You — Average

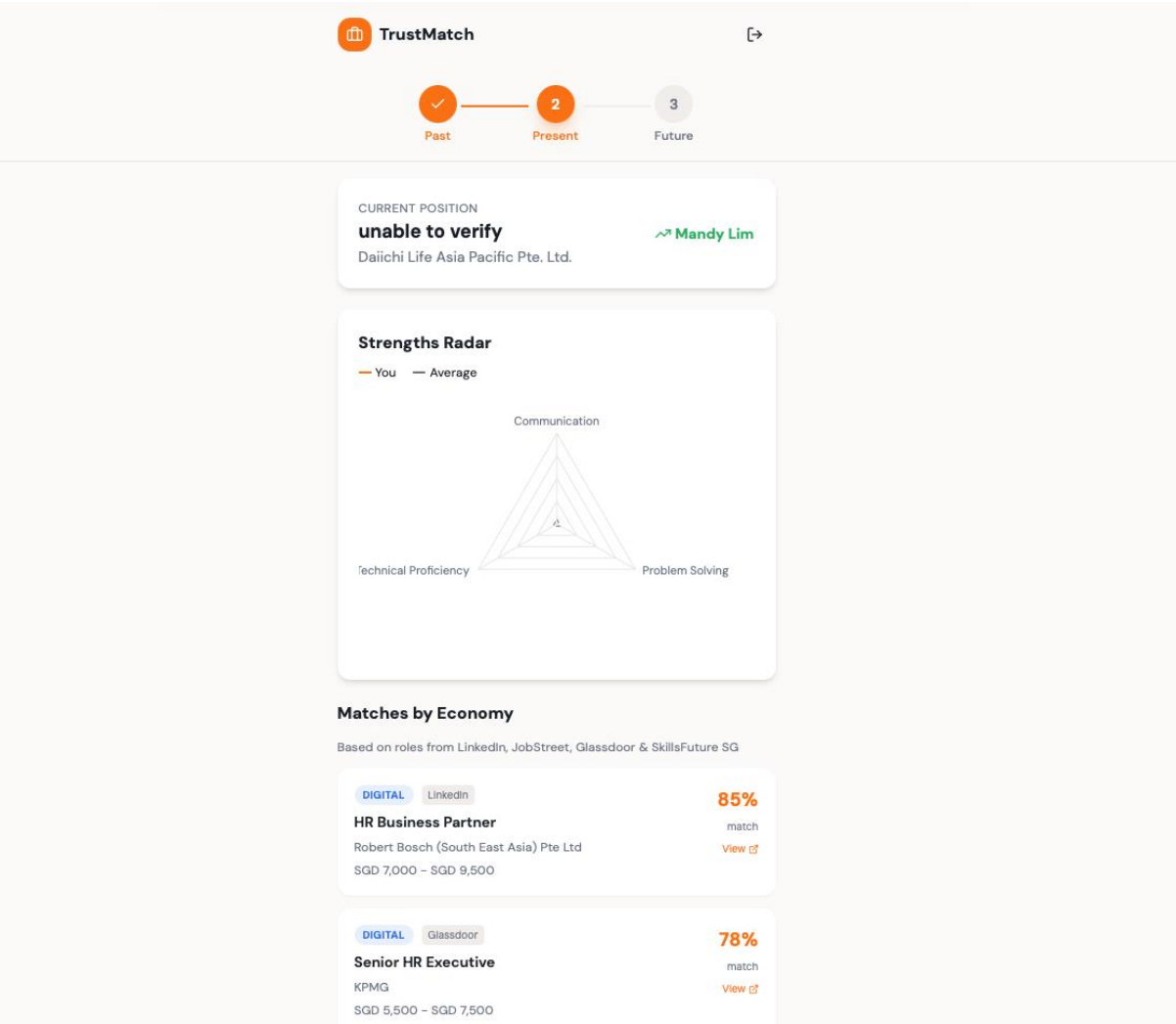


Matches by Economy

Based on roles from LinkedIn, JobStreet, Glassdoor & SkillsFuture SG

🔄 Searching job markets...

Explore Future Roles →



Claude Code (MVP)

Skillbridge

Your Career.
Verified & Matched.

AI-powered career development
for Singapore's modern workforce.

1

Verify Your Past

Upload your CV & certificates.
Get credentials verified instantly.

2

Match Your Present

AI extracts & maps your skills
to a standardised taxonomy.

3

Shape Your Future

Discover career pathways, skill gaps
& personalised learning plans.

10k+

Careers mapped

500+

Role pathways

92%

Match accuracy

Welcome back

Sign in to continue your career journey.

Sign In

Create Account

EMAIL ADDRESS

you@email.com

PASSWORD

Enter your password

Forgot password?

Sign In

or

Don't have an account? [Create one](#)

Skillbridge

Your Career.
Verified & Matched.

AI-powered career development
for Singapore's modern workforce.

1

Verify Your Past

Upload your CV & certificates.
Get credentials verified instantly.

2

Match Your Present

AI extracts & maps your skills
to a standardised taxonomy.

3

Shape Your Future

Discover career pathways, skill gaps
& personalised learning plans.

10k+

Careers mapped

500+

Role pathways

92%

Match accuracy

Create your account

Join Skillbridge and shape your future.

Sign In

Create Account

FULL NAME

Julius Arjun Fernandez

EMAIL ADDRESS

Arjunf.j.2025@ipm.smu.edu.sg

PASSWORD (min. 8 characters)

CONFIRM PASSWORD

I AM A...

Job Seeker

Map skills & find career
pathways

Employer

Search talent & assess
readiness

Create Account

or

Already have an account? [Sign in](#)

127.0.0.1:4000/past.html

1
2
3



Sarah Chen

Senior UX Designer

92% Verified

Upload CV & Certificates

PDF/DOC, auto-parse roles & education

Drag & drop files here

Upload file

Verified Experience

Senior UX Designer

TechCorp • 2022 - Present

Verified

UX Designer

StartupLab • 2019 - 2022

Verified

Junior Designer

CreativeHub • 2017 - 2019

Pending

Verification Score

92%

Verified

Education

Experience

Credentials

127.0.0.1:4000/resume.html

1
2
3

Resume Builder

Fill in your details. The preview updates live.

Personal info

Full Name

Sarah Chen

Job Title

Senior UX Designer

Email

sarah.chen@email.com

Phone

+65 9123 4567

Location

Singapore

LinkedIn / Portfolio

linkedin.com/in/sarahc

Professional Summary

Crafting intuitive digital experiences, expert in user research, prototyping, and cross-functional collaboration to deliver products used by millions.

Work Experience

Senior UX Designer

Job Title

Senior UX Designer

Company

TechCorp

Start Date

Jan 2022

End Date

Present

Responsibilities / Achievements

- Led end-to-end redesign of flagship mobile app, improving task completion by 38%
- Built and maintained the company design system used by 12 product teams

Live Preview

Sarah Chen

Senior UX Designer

sarah.chen@email.com

+65 9123 4567

Singapore

linkedin.com/in/sarahchen

SUMMARY

Award-winning UX Designer with 8+ years crafting intuitive digital experiences. Expert in user research, prototyping, and cross-functional collaboration to deliver products used by millions.

EXPERIENCE

Senior UX Designer

Jan 2022 - Present

TechCorp

- Led end-to-end redesign of flagship mobile app, improving task completion by 38%
- Built and maintained the company design system used by 12 product teams
- Partnered with engineers and PMs to ship 3 major feature launches

UX Designer

Mar 2019 - Dec 2021

StartupLab

- Conducted 60+ user interviews and usability studies to inform product direction
- Designed onboarding flow that increased DTI retention by 22%
- Created interactive Figma prototypes for investor demos

Junior UI/UX Designer

Jul 2017 - Feb 2019

CreativeHub

- Designed marketing websites and mobile screens for 15+ client projects
- Collaborated with developers to implement pixel-perfect UI components

EDUCATION

B.Sc. Information Systems

National University of Singapore - Honours (Distinction)

2017

SKILLS

Figma

Adobe XD

User Research

Prototyping

Wireframing

Usability Testing

Design Systems

HTML/CSS

Accessibility

1 Past2 Present3 Future

Skillbridge

SC

Sarah Chen

Senior UX Designer · 8 years experience · Singapore

9 Skills Verified92% Profile Complete

Career Pathway Recommendations

Based on your skills and live job market data from LinkedIn, Indeed & Google Jobs

UX Lead / Head of Design

88% match

Lead a team of designers, own design strategy, and drive end-to-end product experience.

\$895k - \$130k

109 openings

Promotion

Product Manager

72% match

Own product direction, translate user insights into roadmaps, and drive cross-functional delivery.

\$590k - \$140k

288 openings

Lateral Move

AI / UX Designer

65% match

Design AI-powered interfaces, craft LLM interaction patterns, and ensure human-centred AI experiences.

\$585k - \$120k

74 openings

Emerging Role

Senior UX Researcher

80% match

Drive mixed-methods research programmes to inform product decisions with deep user insight.

\$575k - \$105k

63 openings

Specialist

Service Designer

79% match

Design holistic services spanning digital and physical touchpoints to improve end-to-end experiences.

\$580k - \$115k

47 openings

Lateral Move

Senior UX Designer

Figma · User Research · Prototyping

92% Verified

Live Job Openings for UX Lead / Head of Design

in LinkedIn 42 · Indeed 38 · Google Jobs 29

Total: 109 openings

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Skills

Add skills (comma-separated)

Figma, Adobe XD, User Research, Prototyping, WI

Figma X Adobe XD X User Research X

Prototyping X Wireframing X

Usability Testing X Design Systems X

HTML/CSS X Accessibility X

Certifications

Google UX Design Certificate

Certificate Name Issuer

Google UX Design C Google / Coursera

Date Issued Credential ID

Mar 2023 GUX-2023-0042

Certified Usability Analyst

Certificate Name Issuer

Certified Usability A Human Factors Inter

Date Issued Credential ID

Aug 2021 CUA-21-9812

+ Add Certification

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Explore My Future

Live Preview

Classic Modern Minimal

Summary

Award-winning UX Designer with 8+ years crafting intuitive digital experiences. Expert in user research, prototyping, and cross-functional collaboration to deliver products used by millions.

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2017

Skills

Figma Adobe XD User Research Prototyping Wireframing Usability Testing

Design Systems HTML/CSS Accessibility

Certifications

Google UX Design Certificate

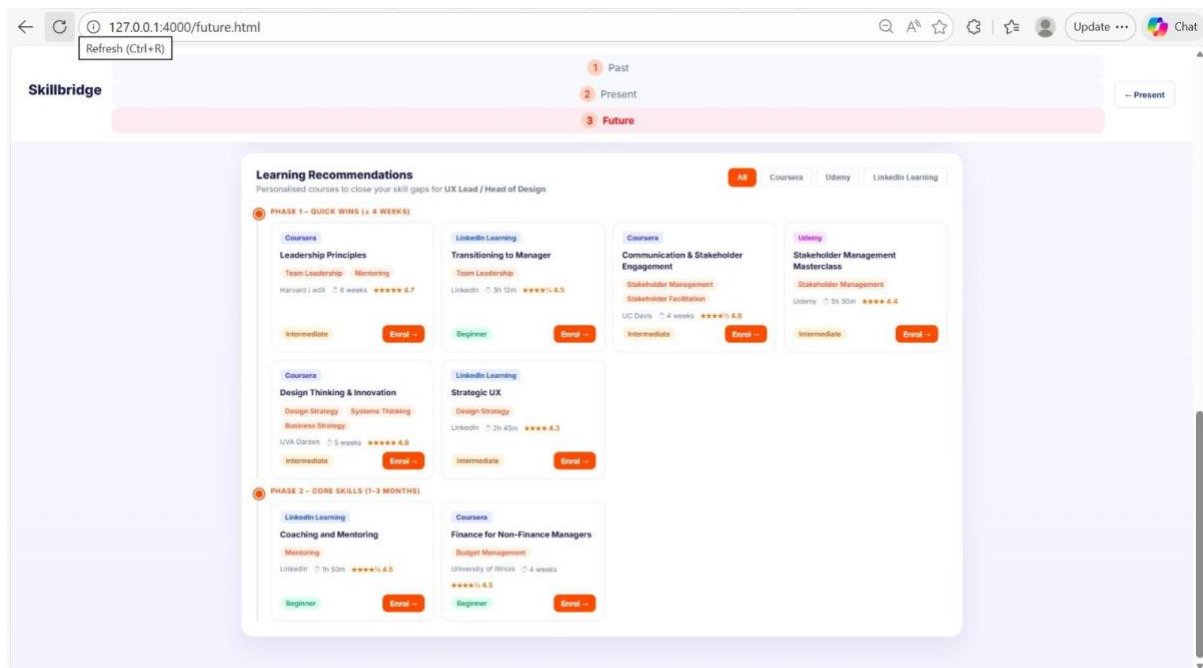
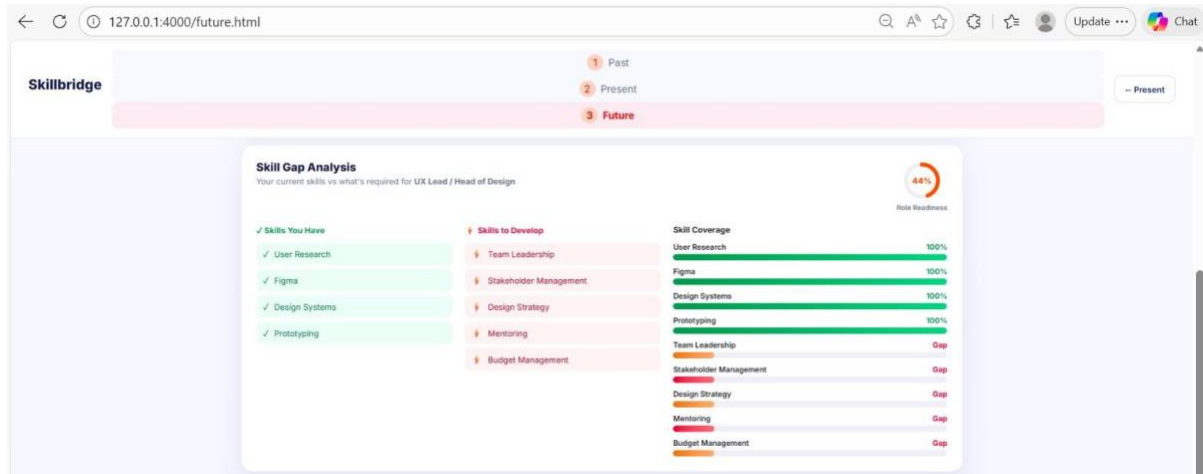
Google / Coursera - GUX-2023-0042

Mar 2023

Certified Usability Analyst

Human Factors International - CUA-21-9812

Aug 2021



RESULTS INTERPRETATION

Analysis of results (if applicable)

Stack & Architecture

The MVP is a single-server Node.js/Express application (server.js, ~1,940 lines) serving both the REST API and static frontend files. The database is SQLite via better-sqlite3, no migrations tool, tables are created on startup. Auth uses JWT stored in localStorage, with bcryptjs for password hashing. File uploads (CV parsing) use multer, with pdf-parse for PDFs and

mammoth for DOCX. All AI calls go to Anthropic's Claude API (claude-haiku-4-5-20251001).

Course and job data comes from SerpAPI.

The frontend is vanilla JS split across four pages, index.html (dashboard/CV), past.html (experience timeline), future.html (pathways & learning), resume.html (resume builder), each with their own JS file. No framework, no build step.

Features Currently Available

Authentication

- Register / login / logout with JWT
- Password reset (token-based)
- Role field on the user record (jobseeker or employer), though employer has no separate UI yet

CV Management

- Upload PDF or DOCX, text extracted and stored
- Paste raw CV text as an alternative
- *Claude Code* extracts structured data: skills, job history, education, certifications, personal info
- Each experience, education entry, and certification gets a verification_status field (pending, auto_verified, verification_requested)

Auto-Verification (Rule-based)

- Experiences at well-known companies (Google, Meta, DBS, Grab, government bodies, etc.) are auto-marked auto_verified
- Degrees from recognised universities (NUS, NTU, Oxford, MIT, etc.) are auto-verified
- Certifications from known issuers (AWS, Google, Microsoft, Cisco, PMI, etc.) are auto-verified
- Everything else is pending; users can request manual verification via PATCH /api/cv/verify

Career Pathways (Future Page)

- *Claude Code* generates 4 career pathway options from the user's skills, each with title, description, required skills, match %, salary range, and demand score
- Market validation pulls live job count and salary range from Google Jobs via SerpAPI
- Hard/soft skill gap analysis with priority levels (Critical / Important / Useful), time-to-learn estimates, and a tailored insight
- Role readiness % calculated deterministically: $\text{matched skills} / \text{required skills} \times 100$
- Learning pathway: real courses from Coursera, Udemy, LinkedIn Learning fetched via SerpAPI; curated fallbacks for zero-result skills
- Platform filter (All / Coursera / Udemy / LinkedIn) with sequential phase renumbering

Resume Builder

- Generates a formatted resume from stored CV data
- Exportable

What's Missing / Not Yet Built

Employer Side (Biggest Gap) The employer role exists in the database schema but there is zero employer-specific UI, routing, or logic. An employer portal would need:

- Employer registration with company verification
- Ability to post job requirements / role profiles
- Search/browse verified jobseeker profiles
- View trust scores and verified credentials
- Request additional verification on specific claims

Skill & Experience Verification (Real Trust Layer) The current verification is shallow:

- auto_verified is just a keyword match on company/institution name, it doesn't actually confirm the person worked there
- pending items have nowhere to go, the PATCH /api/cv/verify endpoint marks them as verification_requested but there's no admin interface, no third-party verification integration, and no one reviewing them
- Missing: LinkedIn OAuth to cross-check employment history, reference check workflows, document upload for certificates, or any integration with an identity/credential verification service (e.g. Trulioo, Veriff, or even just LinkedIn API)

Trust Score The name "TrustMatch" implies a visible trust/credibility score per profile, but no such score is computed or displayed.

Profile Visibility / Matching No mechanism for a jobseeker's verified profile to be discoverable by employers. There's no matching algorithm connecting employer job requirements to candidate profiles.

Notifications No email or in-app notifications when verification status changes.

Admin Panel No interface for manually reviewing verification_requested items.

In short: the jobseeker side of the product is well-built for an MVP. The employer side and the actual "trust" infrastructure (real verification, trust score, profile matching) are the two major gaps before the MVP lives up to its name.

KEY FINDINGS AND RECOMMENDATIONS

Summary of key findings and recommendations

The human role is conceptual, not operational and the group's informed decisions before prompting the tool contributed more effectively than anything done within it. Upstream thinking determines downstream output as shown with Perplexity resolving the design before Figma Make generated it. Short, technically directive prompts always gave the better result as compared to quick prompt reactions to failed outputs which wasted iterations. Figma Make handles layout and logic well but cannot resolve compositionally precise graphic tasks through prompting alone. If code could be verified before moving platforms this would prevent errors to propagate into downstream tools like Lovable.

This shift highlights an important lesson in the role AI plays within the development process. While offering speed and efficiency in initial scaffolding, careful human oversight is required, particularly when moving beyond simple tasks. The depth needed for more complex and precise logic reinforces the notion that AI platforms should act as assistants, and not replace human creativity or judgment. Focusing on the concepts to build a scalable and sustainable project, including understanding user needs, defining clear product vision, and designing

intuitive user experiences, can greatly reduce rework downstream. The team explored concepts such as Spec-driven development (SDD) using Architecture Decision Records (ADRs) that prioritises clear, structured requirements before AI agents write code, to bridge the gap between vibe coding, and ensuring AI generate code aligns with technical constraints, architectural patterns and business goals.

CONCLUSION AND FUTURE WORK

Achievements, challenges faced, and future extensions

The project was an educational journey for the members in conceptualising, designing, prototyping and executing a AI-based solution to solve a real world problem. While not all member were equally versed in coding, the prevalence of AI tools today helped alleviate some of the expertise gap. As a MVP, the solution prototype met its goals. Future extensions in the areas of features catered for the employer (vis the employee) will make it more useful as a product, and potentially be competitive in the market.

BIBLIOGRAPHY

Citations of research papers, books, and periodicals referenced (APA style)

References

Massenkoff M., & McCrory P. (2026). *Labor Market Impacts of AI: A New Measure and Early Evidence*. Anthropic.

Hazan E., Madgavkar A., Chui M., Smit S., Maor D., Dandona G. S., & Huyghues-Despointes R. (2024). *A New Future of Work: The Race to Deploy AI and Raise Skills in Europe and Beyond*. McKinsey Global Institute.

Fok J. (2026). *Over half of PMEs feel the need to upskill amid AI disruptions: NTUC survey*. The Business Times. <https://www.businesstimes.com.sg/singapore/over-half-pmes-feel-need-upskill-amid-ai-disruptions-ntuc-survey>

APPENDICES

Documentation include code snippets, data tables, and raw results (if any)

Rapid Functional Prototyping Development on Lovable.dev

Master Prompt

Build an AI career development platform MVP called "TrustMatch"

You are an autonomous AI product engineering team tasked with designing and building an MVP mobile-first application for an AI-powered Career Development Platform. Your goal is to collaboratively design, build, test, and deploy a functional MVP within a simulated startup environment. Prioritize speed, modularity, and scalability over perfection.

[2] PRODUCT VISION & PURPOSE

Problem statement:

With the increasing proliferation of AI into everyday life and work, the job market is being disrupted fundamentally in many ways that are of concern both to the country at large, and to the individual job-seeker as well. For the worker, there is genuine concern that AI has replaced his job, and his current repertoire of skills now becoming irrelevant to the job market. Based on his skills, what are the best-fit jobs available to him currently? Based on his desired job roles, what new skills does he need, and how can he equip himself with these? Beyond the individual worker, solving these will also enhance the overall workforce and the state of the economy in Singapore.

This project aims to build a solution prototype that leverages AI to provide the following recommendations to the individual worker:

- Best-fit available jobs based on current skills
- Upskilling options based on job aspirations

These recommendations will be data-driven, and organised around the twin pillars of demand and supply data:

- Demand: Job aspirations (employee demand); job listings (employer demand)
- Supply: Worker skills (trainee supply); upskilling options (trainer supply)

The platform exists to help professionals:

- Map their current career state
- Identify skills gaps
- Discover future career pathways

- Receive personalized upskilling recommendations
- Track progress toward role readiness

The platform uses AI to align individual capability development with real labor market demand.

3 TARGET MVP OUTCOMES

Agents must deliver a working MVP that includes:

User-Side Capabilities

1. Profile Creation (PAST)
2. Career History Upload of CV and Certificates and verification of experience (PAST)
3. Skills Extraction & Standardization (PRESENT)
4. Career Pathway Visualization (FUTURE)
5. Skill Gap Analysis (FUTURE)
6. Learning Recommendations (FUTURE)

Agents must implement:

1. Resume & Profile Parsing - NLP extraction of roles, skills, tenure
2. Skills Ontology Mapping - Map extracted skills to standardized taxonomy
3. Skill Gap Analysis Model - Compare user skills vs. role requirements
4. Career Path Prediction - Suggest adjacent roles
5. Learning Recommendation Engine - Match gaps → courses

Models can use:

- Open-source LLMs
- Embedding models
- Prompt-engineered reasoning chains

D. Data Layer

Ingest and structure:

- Job descriptions
- Skills demand data

- Salary benchmarks
- Course metadata

Data Sources (simulated or API-integrated):

- LinkedIn job data
- Indeed listings
- Glassdoor salary insights

If live APIs unavailable, generate synthetic datasets.

Integrate course providers:

- Coursera
- Udemy
- LinkedIn Learning

Pull:

- Course title
- Skills taught
- Duration
- Difficulty level

Agents must implement the following pipelines:

Workflow 1 – Skill Extraction

Input: Resume and certificates

Process:

1. Parse work history
2. Extract skills via NLP
3. Normalize skill names
4. Map to taxonomy
5. verified profile score

Output: Structured skill profile

Workflow 2 – Skill Gap Analysis

Input:

- User skill profile (strengths radar)
- Target job role (matches by economy)

Process:

1. Retrieve role skill requirements
2. Compare proficiency levels
3. Score readiness

Output:

- Gap list
- Readiness %

Workflow 3 – Career Pathway Prediction

Input:

- Current role
- Skills graph

Process:

1. Identify aspirational roles and skills gap
2. Rank by transition feasibility
3. Estimate transition time

Output: Career pathway map

Workflow 4 – Learning Recommendations

Input: Skill gaps

Process:

1. Match gaps → course metadata
2. Rank by relevance
3. Filter by duration / cost

Output: Personalized learning plan

UX PROTOTYPE REQUIREMENTS

Agents must generate wireframes and clickable prototypes strictly with the attached generated screenshots in a mobile friendly version.