

Mostafa Asef

Software Engineer

sefco.work@gmail.com • 0415 919 332 • Sydney, NSW 2127, Australia
linkedin.com/in/a5ef • github.com/RiceSouffle • sefdev.com

SUMMARY

Software engineer and Honours graduate who designs and ships production software (browser extensions, mobile apps, and AI-integrated tools), backed by internship experience at IBM and in applied AI. Pairs hands-on full-stack development with real operational ownership, having run the remote commercial side of a family engineering firm delivering regulated aviation infrastructure contracts. Works fluently across Java, Python, React, TypeScript, and Flutter, and is comfortable owning problems end to end.

SKILLS

Languages Java, Python, Dart, Scala, JavaScript, TypeScript, SQL, C

Frameworks React, React Native, Flutter, Node.js, Express, Flask, Tailwind CSS

Cloud & DevOps Docker, GitHub Actions, Azure, IBM Cloud, Google Cloud

Data & Storage SQLite, Firebase, Hive, Chrome Storage API

APIs & Protocols RESTful APIs, HL7 FHIR, Chrome Extension APIs, Reddit API, Anthropic API

Practices Agile, OOP, Data Structures & Algorithms

EXPERIENCE

General Manager

Rose Engineering Ltd • Dhaka (Remote) • 06/2025 – Present

- Managed the remote operations of an engineering firm delivering airport infrastructure contracts for the Civil Aviation Authority of Bangladesh (CAAB), supporting 2–3 large concurrent projects.
- Owned supplier and procurement communications, including sourcing vendors, negotiating with suppliers, and coordinating logistics for airport hardware such as baggage conveyor systems and airfield floodlighting.
- Drafted and managed contracts, tender submissions, and project documentation to meet CAAB requirements, working alongside the Managing Director who oversaw on-site delivery.

Operations Support

Rose Engineering Ltd • Dhaka (Remote) • 01/2020 – 06/2025

- Supported the family-run engineering firm's commercial operations while completing an engineering degree, contributing to supplier coordination, documentation, and contract administration for CAAB airport infrastructure projects.
- Took on increasing responsibility over time, progressing into the General Manager role in 2025.

Artificial Intelligence Engineer Intern

Centre for Armed Violence Reduction (CAVR) • Sydney • 01/2025 – 06/2025

- Designed and deployed an AI-powered WhatsApp chatbot integrating ChatGPT and the Twilio API for multilingual (Tok Pisin & English) interaction.
- Built real-time message handling logic including language detection, translation, and response formatting.
- Researched and implemented a Tok Pisin–English translation pipeline using Python, Flask, and AI APIs (OpenAI, Gemini).
- Applied error handling, logging, and performance optimisation to improve translation accuracy and reliability.
- Collaborated with supervisors and stakeholders using Agile methodologies of weekly reviews and iterative sprints.

Software Engineering Intern

IBM • Sydney • 07/2024 – 12/2024

- Designed and implemented RESTful API endpoints (CRUD operations) for IBM's Open Healthcare Platform, ensuring HL7 FHIR compliance.
- Integrated Hyperledger Fabric blockchain for secure, immutable audit logging and compliance with HIPAA and GDPR.
- Developed and tested APIs using Java, Maven, Docker, and Postman in a virtualised environment.

- Produced UML diagrams, system architecture documentation, and user manuals for developer handover.
- Participated in Agile sprints and cross-functional stakeholder meetings with IBM mentors and technical teams.

Logistics Assistant

David Jones • Sydney • 08/2022 – 01/2023

- Coordinated Click & Collect and in-store fulfilment orders to ensure timely customer delivery.
- Managed deliveries, transfers, debits, and work orders to maintain inventory accuracy and compliance.
- Collaborated across logistics, sales, and customer service teams to support smooth store operations.

PROJECTS

Leaflet • Chrome Extension • React, TypeScript, Tailwind CSS, Chrome APIs

- Built and shipped a Chrome extension for saving, restoring, and managing browser tab sessions with Manifest V3.
- Implemented service worker architecture with chrome.alarms for auto-save scheduling and background tab suspension.
- Created typed storage wrappers around chrome.storage.local and chrome.storage.sync for cross-device settings sync.

NootPad • AI Note-Taking App • Flutter, Dart, SQLite, Anthropic Claude API

- Built a full-featured note-taking app with rich text editing (flutter_quill), image insertion, colour-coding, and pinning.
- Integrated the Anthropic Claude API for summarisation, writing assistance, smart categorisation, and cross-note Q&A.
- Designed a privacy-first architecture with local SQLite storage and encrypted on-device API key management.

Curriculum Gap Analyser • Web App • Next.js 16, React 19, Tailwind CSS, Anthropic API

- Built an AI-powered web app that compares educational syllabi against live job postings to identify curriculum skill gaps.
- Implemented file parsing (PDF, DOCX, CSV) with AI-driven skill extraction, demand frequency tracking, and coverage scoring.
- Designed a four-step wizard UI with interactive Recharts visualisations and actionable curriculum recommendations.

FirePlace • Mobile App • Flutter, Dart, Riverpod, Reddit API, Hive

- Developed an image-curation mobile app pulling content from 180+ subreddits across 30+ interest categories.
- Built screen-time tracking with live usage counters, weekly charts (fl_chart), and configurable break reminders.
- Implemented offline-first architecture with Hive NoSQL for bookmarks, cached images, and usage metrics.

Edge Computing for Swarm Navigation • Honours Thesis • ROS, Gazebo, Python

- Designed and simulated edge-assisted architectures for swarm robotics with multi-robot collision avoidance.
- Demonstrated resource offloading and real-time coordination improvements through edge computing strategies.

EDUCATION

Bachelor of Engineering (Honours), Specialisation in Software Engineering

Macquarie University • Sydney • 2021 – 2025

ACHIEVEMENTS & LANGUAGES

IBM Open Project Developer, Level 1 • Open Healthcare Platform

Languages English (Native, IELTS 8 / PTE 90) • Bengali (Native) • Hindi (Professional) • Urdu (Professional)