Amitabh Kumar

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Education

University of New South Wales — Kensington, NSW
Bachelor of Software Engineering (Honours) — December 2026

Relevant Coursework and Skills: Data Structures and Algorithms, Object-Oriented Programming, Computer Networks, Human Computer Interactions, Engineering Design and Professional Practice, Cloud and Application Security, AWS/Azure, CI/CD pipelines, Postman/Swagger, Python, JavaScript, Java, SQL, C.

Work Experience

Fintech AI Innovation Consortium (FAIC) — UNSW, Finance, AI/Cloud, Digital Trade
Software Engineering Intern — April 2025 - Present

- Granted by Prof. Fethi Rabhi, I am collaborating with PhD students to lead database refactoring and population, AI/NLP/agentic research and full-stack implementation for business process automation.
- Created a secure, scalable and PEPPOL-compliant API in Lambda for e-invoicing with schema validation, incorporating feedback from stakeholders to align with industry & regulatory needs.
- Contributing to backend enhancements in a Flask-based web app that translates BPMN workflows into AWS Step Functions and improving AWS SQS communication between the S3 bucket and Lambdas.

Research Analyst — March 2025 - Present

- Working under the FAIC initiative, I am leading APAC market research on digital trade and fintech to support product strategy, market fit and commercialisation planning with industry partners.
- Engaged with AWS, Westpac, government partners and C-level executives at fintech and SaaS startups to explore partnership opportunities, validate solution fit and user adoption goals across APAC markets.
- Delivered stakeholder briefs and technical requirement reports on adoption trends, competitive positioning and risks to inform AI business process adoption and market engagement strategies.

Training & Consulting Firm (Second Family Business) — 2023 - July 2025
Co-founder & Product/Operations Lead — Acquired

- Co-founded family training and consulting firm, leading go to market strategy and product operations ensuring offerings remain innovative and impactful while maintaining efficient operations.
- Grew business from startup to 15 person team through strategic B2B partnerships and B2C client acquisition, establishing sustainable growth throughout 2024.
- Through up and downs, we successfully negotiated and completed acquisition in July 2025, demonstrating entrepreneurial leadership and ability to scale profitable operations from 0 to 1 to 100.

InspireEd (Registered Training Organisation) — Education, Government, SaaS
Platform Operations Engineer — May 2024 - February 2025

- Developed a REST API to integrate the aXcelerate CMS with Azure Communication Services, enabling secure and automated email enrolment workflows.
- Managed Learning Management System, CMS and SMTP network infrastructure, applying security best practices to ensure data integrity, availability, and compliance with RTO standards.
- Enhanced email reliability by deploying and configuring a secure, open-source SMTP gateway, saving cost, improving fault tolerance and ensuring cloud security.

Projects

Full-stack UBL Invoice Automation Platform — February 2025
TypeScript, Node.js, Express, AWS (RDS, S3, Elastic Beanstalk), Gemini AI, Vercel, Gmail SMTP

- Developed a REST API and full-stack web application for UBL invoice generation/validation, translation (via Gemini AI), PDF export and SMTP dispatch, deployed on Elastic Beanstalk and Vercel.
- Designed schema validation and compliance mechanisms with PostgreSQL on AWS RDS, implemented CI/CD pipelines via GitHub Actions and deployed backend services on AWS EC2 to manage AI agentic workflows and allowing user driven natural language commands.

Learning Management System SAAS — June 2024 - Present
TypeScript, SST SDK (IaC), AWS (Amplify, EC2, RDS), Azure Entra ID, Node.js, HTML, CSS

- Building a scalable LMS web platform with serverless deployment on AWS Amplify and secure authentication using Azure Entra ID as well as focusing on secure API gateway usage.

- Designing modular backend services to handle course delivery, enrolments and user management using Node.js with secure token-based access controls.

Open Source NpmJS package March 2024

TypeScript, Javascript, Open source, Version Control, NPM

- Published a package called any-call-system-web on NPMjs, a flexible call routing and trigger library used by multiple projects, achieving 100+ downloads. Link: www.npmjs.com/package/any-call-system-web

Extracurriculars and Awards

- Received a letter of recommendation from Prof. Fethi Rabhi, Director of Software Engineering at UNSW and esteemed academic with 25+ years of experience, recognising my technical aptitude and academic distinction.

- Top 1% of cohort in *Software Engineering Fundamentals (COMP1531)* and *Requirements and Design Workshop (SENG2021)* at UNSW.

- Awarded Certificate of Achievement in *Financial Literacy with Models*, demonstrating strong analytical and economic modelling capabilities by DKM and ClayMatter.

- Won 1st place for Most Aesthetic Design in Hackathon; engineered a functional Mars Rover with precision bidirectional movement, remote-controlled scoop and real-time telemetry with UNO Arduino Wi-Fi. *Demo video: https://www.youtube.com/watch?v=ygeF7XZYYzQt*

- Volunteer Lead Tutor at a Code Club Australia branch, mentoring group of 10 students with 2 other peers, ensuring quality and service. Recieved certificate for work.

References

Available upon request