

# AMITABH KUMAR

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<https://www.youtube.com/@amitabhkumar4528/videos>

## EDUCATION

### University of New South Wales

Bachelor of Software Engineering (Honours)

Kensington, NSW

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) Software Engineering Intern

UNSW, Finance, AI/Cloud, Digital Trade  
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.

### InspireEd (Registered Training Organisation) Platform Operations Engineer

Education, Government, SaaS  
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. *Demo video available.*

### 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](https://www.npmjs.com/package/any-call-system-web)

## EXTRACURRICULARS AND AWARDS

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- 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 available.*
- Volunteer lead tutor at a Code Club Australia branch, mentoring group of 10 students with 2 other peers, ensuring quality and service.

## REFERENCES

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*Available upon request*