Roshan Kashyap

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Education

- **Queen Mary University of London** — London,UK
  MSc in Computer Science; Grade: Merit — *Sep 2024 - Sep 2025*
  Courses: *Algorithms and Data Structures, Machine learning, Cloud Computing*

- **Jyothy Institue of Technology** — Bangalore,India
  BSc in Computer Science; Grade: Distinction — *May 2020 - May 2024*
  Courses: *Algorithms and Data Structures, Machine learning, Cloud Computing*

Skills Summary

- **Languages**: Python,PHP,C++,JavaScript,Java,SQL,Bash
- **Frameworks**: Scikit, NLTK, SpaCy, TensorFlow, Keras, Django, Flask, NodeJS, LAMP
- **Tools**: Git, Docker, Kubernetes, PostgreSQL, MySQL, SQLite
- **Platforms**: Linux, Windows, Web, Arduino, Raspberry Pi, AWS, Google Cloud Platform (GCP)
- **Soft Skills**: Leadership, Event Management, Writing, Public Speaking, Time Management

Experience

- **Queen Mary University of London** — London
  Graduate Teaching Demonstrator (Full-time) — *sep 2024 - present*
  - **Advanced Technical Instruction**: Supported postgraduate-level modules in algorithms, data processing, and cloud computing, contributing to lab delivery, assessments, and technical coursework.
  - **Data and Systems Enablement**: Designed, validated, and optimized datasets for analytical and systems-focused assignments, ensuring accuracy, scalability, and real-world applicability.
  - **Cross-Stakeholder Communication**: Served as a technical bridge between academic staff and students, translating complex concepts into clear, actionable insights for both technical and non-technical audiences, driving stronger engagement and understanding.
- **Wiseen Infotech** — Bangalore,India
  Cloud Computing Engineer — *Jun 2024 – Jul 2024*
  - **Cloud Architecture and Scalability**: Designed and implemented a highly available three-tier AWS architecture leveraging Elastic Load Balancer, EC2, and Amazon Aurora to ensure fault tolerance, scalability, and optimized database performance.
  - **Production-Grade Deployment**: Deployed and integrated React.js frontend and Node.js backend applications with autoscaling, health monitoring, and load balancing, delivering resilient, performant, and enterprise-ready cloud solutions..

Projects

AI-Powered Intelligent Learning Platform

- Designed and built a **full-stack, microservices-based AI learning platform** using **React 18, TypeScript, PostgreSQL, and REST APIs**, delivering scalable, low-latency, and personalized learning through **hybrid recommendation systems** (content-based + collaborative filtering) and adaptive learning paths driven by user behavior and engagement analytics.
- Engineered a **secure, production-ready backend** with **Drizzle ORM, TanStack Query, and role-based access control**, implementing real-time analytics, performance optimization, encrypted data handling, and strict **GDPR/FERPA compliance** to ensure reliability, privacy, and ethical AI deployment.

Doctor's Prescription Recognition System

- Developed a **deep learning–based handwriting recognition system** using **Tesseract OCR (CNN) and LSTM models** to accurately digitize handwritten medical prescriptions, reducing human interpretation errors and improving medication safety.
- Built a **Flask-based pharmacy management application** integrated with **MySQL and Telegram APIs**, enabling prescription uploads, patient data synchronization, and real-time reporting to streamline pharmacy workflows and operational efficiency.

ACHIVEMENTS AND PUBLICATIONS

- Secured **First Place at the College Ideathon** by conceptualizing a **smart COVID patient monitoring wristband**, designed to track body temperature in real time and automatically alert nursing staff during medical emergencies.
- Contributed as a **volunteer with Youth for Seva** under the **Chote Scientist social awareness initiative**, supporting community outreach and educational programs aimed at fostering scientific curiosity and social responsibility among students.
- Co-authored a peer-reviewed research publication, *"Doctor's Prescription Recognition Learning: A Survey"*, in the **International Research Journal of Modernization in Engineering, Technology and Science (IRJMETS)**, presenting a comprehensive analysis of deep learning, CNN, OCR, and hybrid models for medical handwriting recognition; available at https://www.irjmets.com/.../fin_irjmets1716533727.pdf.