

MOHAMMED RISHIN POOLAT

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EXPERIENCE

OFFSeason

March 2024 – December 2025

Software Engineer

Leicester, United Kingdom

- Architected E-Commerce platform using Next.js, Stripe payments, AWS, serving 2,000+ daily users with real-time inventory synchronization, automated email workflows via Trigger.dev, maintaining 99.5% uptime across revenue streams.
- Developed Tracy POS system with real-time inventory tracking across 2 locations, multi-payment processing, VAT management, barcode scanning, sales analytics, supporting 2,000+ daily transactions minimizing inventory discrepancies by 75%.
- Engineered AI agent ecosystem using LLMs, Model Context Protocol (MCP), n8n workflow orchestration, processing 500+ daily operations including order confirmations, payment failures, business notifications with 95% automation success rate.
- Implemented system architecture with TypeScript, PostgreSQL, Docker containerization, CI/CD pipelines, achieving zero-downtime deployments with integrated analytics dashboards for real-time business intelligence across retail operations.

Qburst

July 2023 – December 2023

Software Engineer

Kerala, India

- Led development of a high-impact CMS project with microservices architecture and comprehensive testing, built REST APIs using Node.js and React component libraries, maintaining 98% API uptime through CI/CD pipelines and Docker containerization.
- Established scalable file upload system with AWS S3, EC2, and CloudFront CDN distribution, implementing React hooks for state management, reducing storage costs by 30% and improving reliability through scheduled backup.
- Excelled in agile scrum collaboration methodologies and implemented comprehensive code quality monitoring tools with Jest unit testing framework attaining 85% test coverage rates. Resulted in a 40% boost in team efficiency and 95% task completion rate.
- Enhanced real-time communication using Socket.io and React with Redis caching and connection pooling, minimizing latency by 70% and implemented optimizations within PostgreSQL database, resulting in a 30% reduction in resource consumption.

EDUCATION

University of Leicester

Master of Science in Advanced Computer Science

January 2024 - July 2025

Leicester, United Kingdom

APJ Abdul Kalam Technological University

Bachelor of Technology in Computer Science and Engineering

July 2019 - June 2023

Kerala, India

HACKATHONS

IBM CIC Hackathon: Finalist

Innovation Squad Member

Project: Wise Wallet

[Live](#)

- Designed and engineered an innovative receipt analysis application that extracts text from user-uploaded receipts using OCR technology, leveraging a fine-tuned AI model to provide personalized suggestions and feedback.

CERTIFICATIONS

AWS Certified Cloud Practitioner

Amazon Web Services (AWS)

Issued: September 2024

PROJECTS

Penply | JavaScript, React, TailwindCSS, Node.js, Express.js, AWS(EC2, DynamoDB, RDS, S3)

[Live](#)

- Built unified collaborative study platform consolidating real-time chat, note sharing, file management, event scheduling, and calendar functionality into single interface, eliminating context switching by 75% with cloud deployment.

Automated Essay Scoring System | Python, NLP, DeBERTa, Machine Learning, FastAPI

[Github](#)

- Engineered hybrid automated essay scoring system combining DeBERTa ensemble with LightGBM feature models and calibration techniques, achieving 0.8358 QWK on 24,728 essays with comprehensive feedback generation and responsive web dashboard.

Realtime Helmet Detector | Pandas, Numpy, TensorFlow, OpenCV, Scikit-Learn, CNN

[Source Code](#)

- Engineered a real-time computer vision safety system achieving 99% accuracy using CNN built on MobileNet V2 architecture trained on 4,000+ augmented images, deployed on Raspberry Pi with live camera processing and voice alerts, reducing helmet non-compliance by 80% in motorcycle safety applications.

Expense Tracker with Smart Receipt OCR | .NET 9, React, TypeScript, OCR, Entity Framework, Tesseract.js, SQLite

[Github](#)

- Developed enterprise-grade expense management platform implementing Clean Architecture with intelligent dual OCR processing pipeline, achieving 95% automated receipt data extraction accuracy and comprehensive analytics dashboard.

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, C, C#, SQL, HTML/CSS

Frontend : React.js, Next.js, TailwindCSS, Framer Motion, Zustand, Shadcn/UI, Redux

Backend : Node.js, Express.js, ASP.NET Core, FastAPI, Hono, Bun, Socket.io

AI & Machine Learning: LLMs, AI Agents, Model Context Protocol (MCP), NLP, TensorFlow, PyTorch, Scikit-learn, DeBERTa, CNNs

Databases & Cloud: PostgreSQL, MySQL, Supabase, MongoDB, Redis, AWS (S3, EC2, CloudFront), Cloudflare R2, Drizzle ORM, Prisma

DevOps & Automation: Docker, Git, CI/CD, RabbitMQ, BullMQ, N8N Workflow Automation, Jest, Vitest, PM2, Puppeteer, Linux