

KARTIK MADAN

@ kartikmadan97@gmail.com 📞 +44 7944496192 📍 London, United Kingdom

in <https://www.linkedin.com/in/kartikmadan11/>

EXPERIENCE

Infosys

Specialist Programmer II

📅 November 2020 – Present 📍 London, United Kingdom

BP - Wild Bean Café - Micro Market

Problem: Create an enterprise-grade API and analytics platform to automate pricing, sales, and inventory management for self-service **Micro Market** units across 50+ BP forecourt retailers while boosting dealer profitability by 148%.

- **Architected a modular, cloud-native platform** on BP's Apache Camel based **Integration Hub**, processing real-time sales and waste data from Wild Bean Cafe DODO sites across the UK, handling 200+ products per transaction with robust error handling and seamless integration across multiple POS vendors and telemetry sources via automated ETL pipelines.
- **Integrated with core BP's SAP systems** to automate product catalogue retrieval and invoice generation for captured sales and waste data streams.
- Delivered advanced analytics workflows with automated data aggregation, CSV exports, and S3-based data lake integration.
- **Built a comprehensive React admin dashboard** enabling dealers to manage sites, perform manual data corrections, reconcile stock movements, and monitor real-time performance across multiple operational formats.
- Implemented **Conversational Analytics** allowing admins to query data using natural language, automatically generating and executing SQL queries via Athena-DynamoDB connectors, returning insights in plain English.

BP - Eyes on AI and Smart Shelves

Problem: Automate **event detection** using computer vision and deploy dynamic **Electronic Shelf Labels (ESLs)** in BP retail stores in Australia.

- Architected event-driven systems using authenticated AWS Cognito API Gateways to detect critical events (smoke detection, floor hazards) through edge computing devices.
- Designed **auto-scaling infrastructure** on AWS VPC with load balancing and CI/CD pipelines supporting multi-store deployments at enterprise scale.
- Leveraged Terraform to orchestrate AWS services including Cognito, Kinesis, and IoT Greengrass.
- Engineered auto-scaling services with intelligent segment usage monitoring to **handle up to 6M queries per second**.
- Built robust data pipelines consuming and processing real-time feeds from edge devices and third-party APIs.

Additional Experience

- **High Performance Computing Sphere:** Developed a recurrent neural network model to infer forecast information on Time Series data on Forex Charts and integrating it using web sockets with MetaTrader.
- **Geminid Systems:** Worked as Software Engineering Intern to develop a blood donation solution with Google Maps API to determine nearby willing and compatible donors.
- **Coding Ninjas** (May 2019 – July 2019): Teaching Assistant in Data Science Course for a batch of 30 students

POSITIONS OF RESPONSIBILITY

- Convener, Veda - The Quiz Society | MSIT
- Head Boy, Class XII | VVDAV School

EDUCATION

Guru Gobind Singh Indraprastha University

B. Tech (Electronics and Comm. Technology)

(8.2GPA)

📅 2016 – 2020

ACHIEVEMENTS

- 2019 Smart India Hackathon winner
- Winner – Barco Geekathon 2018
- Won Infosys RISE Award for Business Ninja in Q3FY24 and Tech Wizard Q4FY23
- Won the Infosys Digital Commerce Professional and AI Professional Skill Tag
- Codeforces best finish: World Rank 625 | National Rank 37 (of 7585 participants)

PUBLICATIONS

- [Analyzing time series data for Forex and Stock Market Trends using recurrent neural networks.](#)
- [Development for Communication and Software system for facilitating ease of availability of blood.](#)
- **Patent (filed):** System and Method for identifying and replacing proprietary images with synthetically generated images.

SKILLS

- C/ C++/ PYTHON/ JAVA/ React/ Next.js
- AWS, GCP, Terraform, Alteryx
- Node.js, MongoDB, SQL, Jenkins, GIT
- HTML, CSS, Tailwind, Framer Motion

COURSEWORK

- Algorithm Design and Analysis
- Data Structures
- Object Oriented Programming
- Database management system
- Machine Learning
- Computer Networks

PROJECTS

Stroke Rehabilitation Developed a solution for patients recovering from strokes by providing remote diagnosis and remedial processes such as Physiotherapy.

Easy Contracts Developed a system to create and analyze legal contracts using Falcon-7b LLM and LangChain.

Captcha Decoder Used K-means and CNN to break 4-digit captcha.