# SANDEEP MALVIYA

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## PROFESSIONAL SUMMARY

Agentic AI Engineer and Data Scientist with a Distinction in MSc Data Science (University of Exeter) and 5+ years of software engineering experience shipping production systems across healthcare IoT, ride-hailing, FinTech, and enterprise AI. Specialises in architecting, fine-tuning, and evaluating multi-agent systems, LLM evaluation pipelines, and low-latency real-time data streaming architectures. Proven track record in bridging frontier machine learning (NLP, Transformers, FinBERT) with robust mobile and cloud engineering.

## TECHNICAL SKILLS

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| **GenAI & LLMs:** | Gemini 2.5 API, Vertex AI, Google ADK, AWS Bedrock (AgentCore), MS Copilot Studio, MCP, Prompt Engineering, LLM-as-a-Judge Evaluation |
| **ML & Data Science:** | PyTorch, TensorFlow, Scikit-learn, Pandas, NLP, Transformers, FinBERT, LSTM, CNNs, Predictive Modelling, Data Analysis |
| **Languages:** | Python, SQL, Dart, Kotlin, Java, JavaScript/TypeScript |
| **Cloud & DevOps:** | GCP (Vertex AI, Cloud Storage, BigQuery), AWS, Azure, Docker, GitHub Actions, Fastlane, CI/CD, Firebase |
| **Mobile & Real-Time:** | Flutter (iOS/Android), BLE, MQTT, WebSockets, REST APIs, PostgreSQL, SQLite, Firebase Realtime Database, MongoDB |
| **Frontend & Web:** | React, Angular, HTML, CSS, Streamlit |
| **Testing & Tools:** | Playwright, Git, JIRA, Agile Methodologies |

## EXPERIENCE

**Agentic AI Engineer** | University of Exeter — Aug 2026 – Present | Exeter / London, UK

- Deployed 3 production AI agents (course-content reviewer, JD generator, tender finder) for 5–10 academic staff, reducing task turnaround from 2–3 days to under 3 hours and saving an estimated £50,000/year, by architecting multi-agent pipelines with AWS Bedrock, MS Copilot Studio, custom MCP tools, and institutional knowledge bases.
- Engineered an automated LLM evaluation framework (LLM-as-a-Judge / CARE benchmark) using Python and Playwright to execute regression test suites, evaluate agent outputs, and benchmark response quality, eliminating prompt regression before deployment.
- Partnered with academic leadership and non-technical stakeholders to navigate ambiguous departmental requirements, translating high-level objectives into deployed, reusable AI solutions and workflow accelerators.

**Software Engineer (Flutter / Full-Stack)** | BringTheFood — Jan 2022 – Jul 2026 | Birmingham, UK (Remote)

- Reduced manual deployment overhead by ~95% across 20+ live restaurant clients by architecting a production CI/CD pipeline with GitHub Actions and Fastlane to build, code-sign, and deploy 80 Flutter applications within a 5-day release cycle.
- Architected and shipped a production restaurant POS platform with dual admin and customer interfaces, integrated with WooCommerce REST APIs for real-time ordering and inventory sync — sustaining zero critical production failures across a 5-year engagement.

**Software Engineer (Flutter / BLE / IoT)** | Marbles Health — Dec 2022 – Aug 2024 | Gurgaon, India (Remote)

- Achieved sub-100ms data transmission latency for real-time biometric telemetry (EEG, tDCS, SpO2, heart rate) by developing a low-latency BLE and MQTT communication layer between proprietary wearable hardware and Flutter mobile applications.
- Spearheaded dual-platform release engineering across iOS App Store and Google Play, managing medical compliance reviews and health data governance with zero critical post-launch defects.

**Software Development Engineer II** | Novo Cabs — Sep 2021 – Oct 2023 | Srinagar, India (Remote)

- Promoted from SDE to SDE II within 18 months by leading Flutter development for a high-concurrency ride-hailing app, implementing MQTT-based geolocation sync and integrating Google Maps SDK, routing optimization, and payment gateways.

**Mobile Application Developer (Freelance)** | Chandorkar Technologies — Dec 2021 – Aug 2022 | Pune, India

- Architected secure cross-platform FinTech applications in Flutter, integrating ~25 APIs (including BlockPay payment integrations) and Firebase Realtime Database for sub-second live financial transaction dashboards.

## KEY PROJECTS

**Multi-Agent Conversational AI System** | Python, Gemini 2.5 Pro, Google ADK, Flutter — 2025

- Architected a production-style agentic AI system featuring dynamic intent routing, token-by-token async streaming to Flutter UI, and an observer LLM validation pass, demonstrating robust enterprise patterns including automated fallback and stateful session management.

**Stock Return Prediction (NLP + Deep Learning)** | Python, PyTorch, FinBERT, LSTM, Transformer — MSc Dissertation | 2025

- Achieved 69.2% directional market prediction accuracy (+4.3pp over baseline) by building an NLP pipeline extracting sentiment signals from 10,000+ financial news articles using FinBERT integrated with price series into a hybrid Transformer-LSTM model.

**Exeter Academic Agent** | Flutter, Gemini API, Stagecoach API, Library API 2025

- Built a conversational assistant providing real-time university library and local transport schedules using Gemini API and third-party REST integrations, published with interactive web demo.

## EDUCATION

**MSc Data Science (Distinction)** — University of Exeter, UK Sep 2024 – Sep 2025

Relevant Coursework: Machine Learning, Learning from Data, Data Systems, Statistical Modelling, Research Methodology, Programming with Python

**BEng Computer Engineering (First Class with Distinction)** — University of Pune, India 2017 – 2022

Dissertation: Hand Sign Recognition using CNN (Team Lead of 4, 70% classification accuracy)

## CERTIFICATIONS & LEADERSHIP

- **Anthropic:** Introduction to Model Context Protocol (MCP) — Credential: xxpvk3z4mqaa (Aug 2026)
- **University of Exeter:** Exeter Leaders Award (May 2025) • Green Consultants Programme (Jun 2025)
- **EAIE 2025 Conference:** Student Assistant — Operations support for 7,000+ global attendees (Sep 2025)
- **Google Developer Student Club Exeter:** Python & ML Teaching Certificate (Nov 2024)
- **Accenture / Forage:** Data Analytics and Visualization Job Simulation (Nov 2024)