Dhrishit Seal

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Education

University College Dublin, MSc in Computer Science (Negotiated Learning) Sep 2026 – Aug 2027

VIT Bhopal University, B.Tech in Computer Science & Engineering (Health Informatics) Oct 2022 – May 2026
– CGPA: 8.25/10

Work Experience

SDE Intern, Nomura Services India Pvt. Ltd. – Mumbai, India [Certificate] Aug 2025 – Jan 2026

- Engineered a Spring Boot microservice (Apache POI, Java Streams) to fully automate an end-to-end financial data loading pipeline from Excel into DB using SQL, replacing a 100% manual workflow; deployed it via Jenkins CI/CD on batch server (UAT), with Autosys job scheduling and email integration.
- Led backend development of Nomura's Budgeting application: RESTful API design, migration of static menu to DB-dependent dynamic menu, RBAC implementation & testing in UAT & DEV environments; ensured coverage with JUnit & Mockito test suites.
- Operated in a target-driven Agile environment, actively contributing to sprint planning, improving team collaboration, and reducing issue resolution time.

SDE Intern, Reliance Industries Limited – Navi Mumbai, India [Certificate] Oct 2024 – Jan 2025

- Preprocessed and reconstructed controller output (OP) and process variable (PV) data to extract slow features via Dynamic Slow Feature (DSFA) Algorithm, improving signal precision and visualization fidelity.
- Validated robustness to noise through numerical simulations on industrial process control dataset(s) which had 18 months of OP/PV process-control logs (approx 390K samples at 2-min intervals).
- Developed a reusable python script for data streams to be used daily (24H) using DSFA for Jamnagar Plant to calculate Hurst exponent for detecting & visualization of valve stiction in industrial process control systems.

Technical Skills

Languages: Java, Python, JavaScript, TypeScript, SQL,
Backend: Spring Boot, Node.js, Express.js, Flask, REST APIs, Microservices
Frontend: React, Next.js, Tailwind CSS
Databases: MySQL, PostgreSQL, SQL Server, SQLite, MongoDB, Firebase Firestore
Data & ML: NumPy, Pandas, Scikit-learn
DevOps & Tools: Git, GitLab, Jenkins, Autosys, Docker, Kubernetes, SonarQube, Postman
Testing & Practices: JUnit, Mockito, CI/CD, RBAC, Agile/Scrum

Projects

Tournament Tracker — Next.js, React, TypeScript, Firebase, Firestore, Tailwind CSS **GitHub**

- Full-stack tournament management platform deployed live with 200+ concurrent users and zero downtime.
- Implemented 3-tier RBAC via Firebase Auth and Firestore security rules, with full audit logging on every admin action. Real-time match updates and broadcast announcements via Firestore snapshot listeners; bulk Excel ingestion and season lifecycle management in the admin panel.

Tesseract — Tauri, React, TypeScript, Python, Rust, OpenRouter **GitHub**

- Built a cross-platform desktop AI agent using Tauri, React, and Rust, integrating a native GUI with Python-based AI workflows for voice interaction, model-driven reasoning, and task automation.
- Developed a modular Python sidecar with API key based LLM integration, local speech processing, automation tools for browser, desktop and document operations across Windows and MacOS. Enabled agentic execution by bridging frontend, native shell, and Python services through IPC and tool orchestration.

Publications

- **A Comparative Study between Vision Transformers and CNN Models on Optical Computed Tomography Scans** **IEEE Xplore** — Benchmarked ViT vs. CNN architectures for retinal disease detection (CNV, DME, Drusen) on OCT datasets.