

# Ritwik Mukherjee

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## Education

**B.Tech CSE (Health Informatics)** — VIT Bhopal University.

CGPA: 8.65 (Expected Aug'26).

XII (ISC) — St. Augustine's Day School, Barrackpore.

92%.

X (ICSE) — St. Augustine's Day School, Barrackpore.

91.8%.

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## Technical Skills

**Analytics & Visualization:** SQL, Pandas, NumPy, Matplotlib, Plotly, Excel, Google Workspace(Docs, Slides).

**Languages:** Python, Java, C++, JavaScript, TypeScript, HTML, CSS.

**Frameworks/Tools:** Flask, Streamlit, Next.js, REST APIs, WebSocket.

**Cloud/DevOps:** AWS (ECS, RDS, ElastiCache, ALB), Docker, Firebase.

**Domains:** Data Analytics, Visualization, Real-Time Systems, AI/ML.

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## Professional Experience

**Data Science Intern** — Zidio Development Pvt Ltd.

Mar'25–Jun'25.

*Project:* [GitHub Repo](#).

- Applied **statistical analysis and ML models** (BERT, DeepFace, MFCC) on multimodal datasets to derive insights.
  - Built dashboards with **real-time data visualization** to recommend tasks, improving decision efficiency by **35%**.
  - Managed the full **data pipeline**: data cleaning, feature extraction, model testing, and deployment.
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## Key Projects

**FIX-Pilot — Real-time FIX Trading Compliance Dashboard**

*Python, SQL, Redis, Flask, WebSocket, AWS* — [GitHub Repo](#) — [Hosted Site](#)

- Built a **real-time analytics dashboard** to parse and visualize FIX 4.2 trade messages with sub-second latency.
- Optimized throughput with **Redis caching + WebSocket streaming**, reducing latency from 5–10s to under 1s.
- Enabled **CSV export of trade data for order tracking and reporting**, supporting compliance and audit workflows.
- Deployed on AWS with **scalable architecture** (ECS, ElastiCache, ALB).

**CodePilot — AI Voice Coding Assistant**

*Next.js, TypeScript, Firebase, Gemini, SQL, Tailwind* — [GitHub Repo](#)

- Engineered a **data-driven intent recognition pipeline** achieving **85%** accuracy.
- Integrated **analytics dashboard with visual insights**, enabling performance tracking across platforms.

**AI Chatbot with Context-Aware Responses**

*Python, Streamlit, Plotly* — [GitHub Repo](#)

- Built a **multi-platform chatbot** achieving 85% intent recognition accuracy.
- Integrated a real-time analytics dashboard and alerts across Web, Slack, and WhatsApp.

**Travel Seeker — Hotel Price Comparison**

*Python, Flask, SQL* — [GitHub Repo](#)

- Aggregated hotel listings via scraping and APIs with **45% retrieval consistency**.
  - Reduced search time by **20%** using real-time pipelines.
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## Certifications and Achievements

- [Applied Machine Learning — Coursera](#): ML pipelines with data prep, training, tuning.
- [Data Science — IMNEO](#): Supervised models, production drift handling.
- [AI Odyssey 1.0 — Prefinalist](#): Healthcare ML solution, national-level finalist.
- [Cyber Security Analyst — IBM CE](#): Threat detection, mitigation, network defense.
- [Graphs Camp — Codeforces Master](#): Selected from 80,000+ students; mastered 17+ advanced graph algorithms.