Manishita Biswas

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Education

- **University of Calcutta** — Kolkata, WB
  B.Tech in Electronics and Communication Engineering | Expected 2026
- **University of Calcutta** — Kolkata, WB
  B.Sc in Physics | CGPA: 8.2 | 2023

Experience

Freelance — **Remote**
Backend Developer — *Dec 2025 – Present*

- Designed Spring Boot backend services using layered architecture for master and lookup data management.
- Developed versioned REST APIs (`/api/v1`) with soft-delete logic and centralized exception handling.
- Improved application performance using Hazelcast caching and PostgreSQL with Spring Data JPA.

Eastern Railway (SDAH Division) — **Kolkata, WB**
Summer Trainee (Under SSE/S/S-II) — *July 2025*

- Configured interlocking tables and route logic using **Invensys Rail** signaling software.
- Assisted in validating safety protocols and documenting real-time railway control workflows.
- Analyzed communication protocols and emergency control logic to enhance signaling reliability.

Projects

FitNovaAI – Fitness Microservices Platform — GitHub
React (Vite), Spring Boot, MySQL, MongoDB, Gemini API, RabbitMQ, Eureka

- Developed a scalable microservices-based platform with React frontend and Spring Boot backend.
- Enabled service discovery and inter-service communication using Eureka and RabbitMQ.
- Integrated Gemini API to deliver AI-based personalized fitness recommendations.

Breast Cancer Classification using Logistic Regression — GitHub
Python, scikit-learn, NumPy, Pandas

- Built and evaluated a logistic regression model on the Breast Cancer Wisconsin dataset.
- Achieved **93.2%** training accuracy and **92.98%** test accuracy.

Rain Drop Size Distribution Analysis at a Tropical Region (Final Year Project) — GitHub
Python, RD-80 Disdrometer Data, NumPy, Pandas, Matplotlib

- Analyzed rainfall microphysics using RD-80 disdrometer field data in a tropical climate.
- Studied drop size distribution and rainfall intensity behavior to understand tropical precipitation patterns.
- Computed physical rainfall parameters and generated scientific visualizations from real-world data.

Programming Skills

Languages: Java, Python, JavaScript
Tools & Technologies: HTML, CSS, React.js, Tailwind CSS, Spring Boot, REST APIs, Microservices, Firebase, MySQL, MongoDB, PostgreSQL, AWS (Certified), Docker, Git, RabbitMQ, Eureka, NumPy, Pandas, scikit-learn, Power BI