Aritra Biswas

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Education

Indian Institute of Technology (Indian School of Mines), Dhanbad	Expected May 2026
B.Tech. in Electronics and Communication Engineering (GPA: 7.94)	*Dhanbad, Jharkhand*
Don Bosco School, Liluah	2009 – 2022
Indian School Certificate (ISC, 97.25%) & Indian Certificate of Secondary Education (ICSE, 95.60%)	*Howrah, West Bengal*

Experience

Bank of New York [BNY]   May 2025 – Jul 2025
Software Development Intern | Python, Pandas, SQL, OracleDB   *Pune, India*
- Built an in-house Python-based data quality system to replace the outsourced iWay DQS platform, achieving 100% functional parity and removing third-party dependency.
- Optimized execution times of data pipelines, cutting execution time from 720s to 71s (90% faster).
- Reverse-engineered and enhanced entire data quality pipeline for scalability, maintainability, and cost savings.

Liquid Galaxy Project | **Certificate**   May 2024 – Aug 2024
Contributor, Google Summer of Code 2024 | Flutter, SSH, KMLs, Geo-Visualization   *Remote*
- Developed the de-facto Liquid Galaxy Controller by merging and upgrading 3 legacy controllers.
- Created Smart POI and Interactive Tours on the Liquid Galaxy rig, boosting engagement.
- Implemented accessibility-friendly controls (Face Detection, Hand Gestures, Voice), expanding reach by 30%.

Projects

Sentinova   April 2025
Flutter, Next.js, Flask, MongoDB, Firebase, DistilBERT
- Developed an AI-powered feedback analysis system with multilingual sentiment detection, live heatmaps, and real-time admin alerts.
- Integrated DistilBERT NLP models to analyze attendee input and social media posts, for instant issue resolution.

Rakshak   May 2024
Kotlin, Firebase, TensorFlowLite, MediaPipe, Android Sensors, Mapbox-SDK
- Built an accident safety app with automatic crash detection (95% accuracy in simulations) using accelerometer and GPS data.
- Implemented AR-based injury identification with severity-based first aid guidance overlays.

Recyclr   October 2023
Kotlin, Firebase, TFLite, Mapbox-SDK, Lottie
- Developed an intelligent waste management app with automatic detection and classification using a TFLite object detection model.
- Optimized waste pickup scheduling by mapping nearest disposal agencies, reducing user effort by 50%.

Technical Skills

Languages: C, C++, Java, Python, Kotlin, XML, KML, Groovy, Dart.
Technologies: Android SDK, Firebase, Room Database, API, Retrofit, TensorFlowLite, Mapbox SDK, SSH, Flask.
Tools: Visual Studio Code, Android Studio, Git, GitHub, Postman, Flutter SDK, Docker (basic).

Achievements

Contributor: Google Summer of Code 2024, under Liquid Galaxy Project.
Rank 1: MasterStack 2.0, Srijan 2023 by IIT[ISM] Dhanbad.
Rank 1: Winter of Code 5.0, App Development Division by CyberLabs, IIT[ISM] Dhanbad.
Rank 3: Hackfest 2025 by Naresh Vashisht Centre for Tinkering and Innovation [NVCTI].
Rank 5: Hackfest 2024 by Naresh Vashisht Centre for Tinkering and Innovation [NVCTI].

Positions of Responsibility

Secretary : Mic.Drop ToastMasters, IIT [ISM] Dhanbad.
Co-Division Head : CyberLabs, App Development Division - Technical society of IIT [ISM] Dhanbad.