SOURAV BISWAS

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Education

National Institute of Technology, Rourkela	**Aug, 2024 – Present**
Master of Technology in Computer Science and Engineering	*Rourkela, Odisha*
University Institute of Technology, Burdwan	**Aug, 2020 – July, 2024**
Bachelor of Engineering in Computer Science and Engineering	*Burdwan, West Bengal*
St. Augustine's Day School, Barrackpore	**June, 2018 – May, 2020**
Higher Secondary (ISC)	*Barrackpore, West Bengal*
St. Augustine's Day School, Barrackpore	**Aug, 2004 – May, 2018**
Secondary (ICSE)	*Barrackpore, West Bengal*

Relevant Coursework

- Applied Deep Learning
- Machine Learning
- Data Structures
- Applied Data Science
- Object Oriented Programming
- Quantum Computing
- Natural Language Processing
- Software Engineering
- Database Management System

Experience

Promact Infotech Pvt. Ltd	**January 2024 – April 2024**
Generative AI Intern	*Vadodara, Gujarat*

- Built Langchain-based Hotel AI Agent with ChromaDB, reducing query time by 34% and improving user experience.
- Created an Intelligent Document Finder with FastAPI and OpenAI LLMs, boosting retrieval accuracy by 42% and cutting API latency by 25%.

Projects

Human Activity Recognition System | *Python, Tensorflow, Transformers, Open3D* — **May 2025**

- Curated a human action dataset (walking, sitting, running, etc.) and preprocessed 2D images and 3D point clouds using denoising, normalization, augmentation, and voxelization. Built a 2D+3D CNN with cross-adaptive attention, trained with Adam, dropout, and learning rate decay, achieving 98.15% accuracy with real-time performance on GPU and Jetson Orin Nano.

JurisSum | *Python, Tensorflow, Langchain, LlamaIndex, Huggingface, ChromaDB* — **July 2024**

- Built a RAG-based tool to summarize and query legal judgments, and modelled an ANN/CNN architecture using word2vec and GloVe embeddings to classify parties from case facts, achieving 98.09% accuracy with a 1D-CNN and word2vec.

DivyaPay – A Payment App for Differently-Abled Users | *Android, Kotlin, Firebase* — **Sep 2022**

- Engineered a smartphone payment app in Kotlin (Android Studio) tailored for users with disabilities, with specialized interfaces and enhanced accessibility for secure, seamless use.

Publications

Biswas, S. & Gupta, S. (Dec 2022): *Fathoming the Relevance of Multi-Armed Bandit Problem in Online Advertisement Recommendation.* 2nd International Artemis Congress on Life, Engineering, and Applied Sciences.

Biswas, S., Das, S. K., & Gupta, S. (Oct 2022): *DivyaPay: Bridging the Digital Divide.* PREPARE@u® — FOSET Conferences.

Technical Skills

Programming Languages: Python, Java, C, Dart
Tools & Frameworks: TensorFlow, Keras, PyTorch, Flutter, Langchain, LlamaIndex, FastAPI
Databases: PostgreSQL, MongoDB, SQL
Backend: FastAPI, Flask, Postman, Swagger UI
Version Control: Git, GitHub

Leadership / Extracurricular

Machine Learning Lead *The Code Bird Club, UIT Burdwan*	**June 2022 – August 2023**
Outstanding Paper Presenter *West Bengal State Science & Technology Congress*	**2023**
2nd Runner Up *FOSET Academic Meet*	**2022**
CSI InApp Finalist *CSI InApp*	**2022**