ELECT.ENGG. SIGNAL PROCESSING AND MACHINE LEARNING(M.Tech Dual 5Y)
MICRO SPL. in ARTIFICIAL INTELLIGENCE AND APPLICATIONS

EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2024	M.TECH Dual Degree 5Y	IIT Kharagpur	8.51 / 10
2019	CBSE	Tulip International School	93%
2017	CBSE	Zydus School For Excellence	10 / 10

INTERNSHIPS

Technology Intern | Standard Chartered (GBS)   May '23-Jul '23
- Designed a **Tableau** Dashboard to present key findings and visualizations from Incident and Jira Reports
- Developed **Excel** macros using **VBA** coding to streamline data manipulation and enhance data quality
- Utilized **Hive** query language and scripts to automate seamless data transfer from Excel files to the Hive database
- Weekly automation slashed data processing and report generation times from **multiple hours** to just **seconds**

Software Developer Intern | Mensari   Oct '22-Apr '23
- Engineered a multi company login system allowing users to seamlessly transition between company profiles
- Built **search filters** to enable users to efficiently filter wallet transactions by specific dates and transaction types
- Implemented unit tests using **Jest** framework to ensure the reliability and functionality of various API calls
- Redesigned the user interface using **Next.js** and **Material UI**, resulting in a modern and intuitive user experience
- Restructered database schemas for the Contacts and Wallets modules, utilizing **Mongoose** and **MongoDB**

Software Developer Intern | upUgo Fitness and Co.   Nov '20-Jan '21
- Developed an interface for the users to perform exercises in front of screens guided by AI Fitness Instructor
- Built a **Dashboard** displaying the user's daily fitness goals and points acheived from different exercise regimes
- Designed several registration forms on the front end and handled the user input data in the **MySQL Database**

PROJECTS

Remote Sensing Scene Classification | Master's Thesis Project   Aug '23-Present
Supervisor: Prof. Anirban Mukherjee, IIT Kharagpur
- Formulated a dual stream structure based on **CNNs** and **VTs** to extract local and long range features
- Implemented a **cross-feature caliberation** (CFC) module to obtain more discriminative fusion features
- Introduced **Deep Mutual Learning** loss, enabling subnetwork collaboration, and boosting the feature extractor
- Used a 2-stage **semi-supervised** method, enlarged the training set by assigning pseudo-labels to unlabeled data
- Selected **ResNet** and **DeiT** as the backbones of the joint model and trained it on large-scale **aerial** image dataset

Throwback Treasures | Web Development (Self Project)   Dec '21
- Developed a dynamic social media app that enables users to add, delete, like and edit photos and tags publicly
- Developed efficient **RESTful API** endpoints for robust data management, ensuring optimal data interaction
- Established a sign-in/sign-out feature utilizing **JWT tokens** stored in local storage for authentication
- Leveraged **Mongoose** to design efficient database schemas to manage user data, photos, likes, and tags
- Deployed the fully functional website on **Netlify** and **Render**, making it accessible to a wider audience

AWARDS AND ACHIEVEMENTS

- Achieved a global rank of **1071** in **Codeforces Round 874** and a max rating of **1427** (specialist)
- Secured a rank of **1560** in **JEE Advanced**, **2019** among **250,000** students who qualified for the exam
- Secured a rank of **1147** in **JEE Mains, 2019** among approximately **10 lakh** students who registered for the exam

SKILLS AND EXPERTISE

Programming Languages: C++ | C | Python | SQL | JavaScript | HTML | CSS
Libraries/Databases: STL | PyTorch | React Js | Mongoose | MongoDB | MySQL
Softwares: LTSpice | SolidWorks | MATLAB | MS Excel | MS Power Point | Tableau

COURSEWORK INFORMATION

Computer Science: Programming and Data Structures (Theory + Lab) | Database Management Systems
Mathematics: Transform Calculus | Mathematics I | Information and Coding Theory
Core: Machine Learning for Signal Processing | Linear Algebra in Signals and Systems | Statistical Signal Processing | Embedded Systems | Probability and Random Processes for Signals and Systems | Analog Electronic Circuits

POSITIONS OF RESPONSIBILITY

Kshitij Campus Affiliate, Kshitij IIT Kharagpur
- Contributed to the publicity for the fest in North India region, reaching out to several media bodies.
- Handled the accommodation of thousands of participants for the fest under the guidance of Core Team Members