Oindrila Das

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EDUCATION

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY KALYANI   Kalyani, WB
B.Tech Electronics and Communications Engineering   2021-2025
CGPA: **8.06**

WORK EXPERIENCE

AEL DATA   Remote
Software Engineering Intern   Sept 2023 - Aug 2024
- Developed and optimized a new **React.js** frontend for the customer-facing web application improving **page load speed by 20%** using techniques like lazy loading and session storage, enhancing code quality and understanding of single-page application architecture.
- Designed and implemented an API gateway to efficiently manage and route incoming requests, enhancing server security and reducing latency by **200 ms** and improving server throughput.
- Integrated RazorPay payment gateway using **Express.js** and **MongoDB**, ensuring seamless and secure financial transactions.

ANANTKAAL   Remote
Flutter Developer Intern   July 2023 – Sept 2023
- Designed and developed the frontend for an Algo-trading platform using **Flutter**, improving user experience and reliability through efficient use of libraries and responsive design.
- Integrated the frontend with the backend APIs to enable seamless data flow and communication between the user interface and server.
- Refactored the codebase, reducing redundancy and improving performance by **16%**.

SKILLS

Programming: C++, C, Python, JavaScript, TypeScript, Matlab.
Frontend Development: HTML, CSS, React.js, Flutter
Backend Development: Node.js, MySQL, MongoDB, API Design, Firebase, Django, Docker, Flask, Git, Machine Learning.

PROJECTS

Myntra Hackerramp   (Node.js, React.js, MongoDB, Machine Learning)
- Created a **Node.js** backend and **React.js** frontend for a virtual outfit builder and home decor visualizer, incorporating **AI-driven** personalized recommendations enhancing user engagement by 5% and styling inspirations, and a drag-and-drop interface for enhanced user interaction.
- Used **MongoDB aggregation pipelines** for efficient querying and utilized machine learning for multi-subject composition and selection to enhance user customization and product interactions.

Image-to-Text Retrieval for Fashion Dataset   (Machine Learning, BERT, CLIP, ViT)
- Developed an image-to-text retrieval system for the FashionIQ dataset using fine-tuned **BERT, CLIP, and ViT** for accurate similarity matching between images and captions, achieving a retrieval accuracy improvement of **82%**.
- Preprocessed large-scale FashionIQ dataset to align images with captions, optimizing for retrieval accuracy.

Intrusion detection system for IoT Networks   (SVM, Random Forest, Ensemble Learning)
- Developed hybrid models combining SVM, Random Forest with Bat Algorithm, and utilized ensemble learning techniques (stacking, bagging, boosting) for intrusion detection using the USNW-NB 15 dataset.
- Provided comprehensive performance metrics, offering valuable insights for robust cybersecurity applications.

Food Donation App (Krita)   (Flutter, Firebase)
- Developed a mobile application using **Flutter** and **Firebase** for a food donation platform, allowing users to browse and request donations while donors can post and schedule pickups.
- Integrated **Firebase Realtime Database** for storing donation details and used **Firebase Authentication** for user account management.

IRIS based attendance system for Ministry of Rural Development (SIH '22)   (Flutter, Firebase, OpenCV)
- Developed a Flutter mobile app that records attendance using an IRIS recognition system for MNREGA workers, utilizing OpenCV for iris extraction and preprocessing.
- Implemented **Firebase** for storing user details and IRIS images.

ACTIVITIES

- **Lead:** GDSC IIIT Kalyani
- Organizer at Status Code 0 2023 by MLH
- Winner at Smart India Hackathon '22 by Govt. of India
- Winner at Hack for Inclusion '22 by MLH