DEBMALYA SUR

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EDUCATIONAL QUALIFICATIONS

Indian Institute of Technology, Dhanbad (IIT Dhanbad)
Master of Technology in Computer Science and Engineering | CGPA : 9.26   2022 − 2024

Government College of Engineering & Ceramic Technology, Kolkata
Bachelor of Technology in Computer Science and Engineering | CGPA : 9.87   2018 − 2022

Bhatpara Amar Krishna Pathsala, Bhatpara
Class XII (WBCHSE) | Percentage: 92.4%   2017 − 2018
Class X (WBBSE) | Percentage: 93%   2015 − 2016

SKILLS

Technical	Python, ML, DL, NLP, LLM, GAN, Computer Vision, REST API, Backend, C++, C.
Limited Exposure	Flask, SQL, SQLite3, Tkinter, Firebase, MongoDB, AWS, HTML, Bootstrap, Tailwind.

WORKING EXPERIENCE

Research Intern @ Samsung Research Institute Bangalore (SRIB)   June 2023 - Aug 2023

- I have worked with the OnDevice AI team on the technology Render Thread Optimization.
- I worked on the texture optimization because if it can increase the user experience & came up with an algorithm which uses Huffman Encoding and which has a compression ratio of 93%.

TECHNICAL PROJECTS

- **Smart Attendance System** *with* **Proxy Detection.** Built an IoT based project to automate the attendance taking procedure. Integrated machine learning and python library to get a higher accuracy. In this project I also integrated the proxy detection part, where the proxy faces will be detected and will be recorded at the back-end mechanism. Technology used python, computer vision, google drive API.
- **Baud News.** I developed a user-specific news service web application designed to deliver personalized news content directly to users. This application tailors news articles based on individual user preferences, ensuring a customized and engaging experience. To keep the news content fresh and relevant, I implemented a Cron job that updates the news JSON file every two hours, ensuring users receive the latest updates. Technology used flask, redis, python, firebase, html, bootstrap.

RESEARCH WORK

A Clustered Federated Learning approach for non-Independent and Identically distributed data (communicated to journal of *Engineering Applications of Artificial Intelligence* under *Elsevier* publication) –

- Final year thesis of IIT Dhanbad under the supervision of Prof. Sachin Tripathi.
- Contributed on the emerging technology Clustered Federated Learning under the domain of Internet of Medical Things (IoMT), where the non-IID data is the most relevant data.
- The objective of this research was to contribute an architecture which would be communication efficient and scalable as well as works efficiently for non-IID data.
- The research work concluded its findings after successfully executing an extensive testing on synthetic dataset.

ACHIEVEMENTS

- GATE CS All India Rank (AIR) 405 on 2022.
- Written and published book on C Programming Quick Start. Also I own the copyright to this book.
- AIR 4th in Theory of Computation NPTEL examination, 2021.
- Secure 127th rank in SEAMO, 2017 from South East Asia region.