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 Online MCQ Portal** *with* **Detection** *of* **Malpractice.** Building an online portal where an user can conduct MCQ examination. I am currently working on the computer vision to detect the malpractice. Making the project such that it can be scalable efficiently. Technology used python, computer vision, system design
- **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 and detect the of proxy attendence. Technology used python, computer vision, google drive API
- **Baud News.** Built an user-specific news service web application. News are sent in the personalized manner. To update news, I have used Cronjob which updates news JSON file in every 2 hours. 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.
- AIR 4th in Theory of Computation NPTEL examination, 2021.
- Secure 127th rank in SEAMO, 2017 from South East Asia region.