Mainak Chattopadhyay

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EDUCATION

Vellore Institute of Technology   Present, Chennai
B.Tech in Computer Science Engineering with specialization in AI and ML - Current CGPA: **8.83**

Delhi Public School Newtown   May 2021, Kolkata
PCM - ISC: **90.1%** | *ICSE:* **94.8%**

SKILLS

Languages and Frameworks: Java, Python, C/C++, JavaScript, TypeScript, ReactJs, NextJs, Node.js, SQL, MongoDB
Libraries and Tools: Pandas, NumPy, Matplotlib, openCV, Tensorflow, Arduino, Git/GitHub, Figma
Others: Management, Operations and Strategy, Software Development

EXPERIENCES

Teach For India | *Software and Technology Operations Intern*   Oct- 2023 – Nov-2023, Kolkata
- Managed over 300 mobile devices using Esper Management Software and assisted in city operations.
- Collaborated with the National Technical Team for Ledger Management in Salesforce Cloud and resolved critical device issues with the Esper Technical team.

HMT Architects | *Web Developer Intern* | [Website](#)   Aug- 2023 – Oct-2023, Chennai
- Designed, Developed and hosted the company website from scratch.
- Brought a 30% surge in visibility and a 40% boost in user traffic after effectively configuring the Google Search Console.
- Implemented sitemaps for SEO optimization, and delved into cPanel, later into GoDaddy for website hosting.

PROJECTS

PAW-sitive | *NextJs, Typescript, MongoDB* | [GitHub](#) | [Website](#)
- Developed an animal healthcare portal with Kinde Auth for user login, enabling connections with blood donors, doctors, and rescue centers. The portal features a spotlight section for medical camps, a customized Gemini chatbot for assistance, AI call support through Callchimp.AI, and donor verification via certificates uploaded through Uploadthing.

Chaters | *Reactjs, Nodejs, Expressjs, MongoDB, JWT, bcrypt* | [GitHub](#) | [Website](#)
- Developed a robust full-stack chat application with a Node.js and Express.js backend and a React.js frontend using ChakraUI.
- Accomplished secure user authentication with JWT and bcrypt for encryption and real-time messaging using Socket.IO.

Breast Tumour Segmentation | *Python, OpenCV, Matplotlib, TensorFlow* | [GitHub](#)
- Implemented a U-Net model and an Attention U-Net model for accurate breast tumor region segmentation in Ultrasound Images, achieving a 20% improvement in Dice coefficient and IoU over existing models thereby improving diagnostic accuracy by 25%.

BugVaani | *Next.js, GitHub API, Novu, MongoDB* | [GitHub](#) | [Website](#)
- Created a platform to discover GitHub good-first-issues, incorporating email notifications via Novu. Developed a subscription form connected to MongoDB and automated API calls with cron jobs every 24 hours.

ACHIEVEMENTS

Hack4Bengal 3.0 - Eastern India's Largest Hackathon | *Champions*
- Got shortlisted from 3000 registrations to the top 150 teams for a 36 hour long hackathon and made it to the podium for the project PAW-sitive.

POSITIONS OF RESPONSIBILITY

Tech Researchers Club, VIT Chennai | *Strategy and Operations Lead*   Oct- 2023 – May- 2024
- Spearheaded VIT Chennai's inaugural open-source month, coordinating a team of 20 to engage over 1000 participants and 10 community partners.
- Successfully grew a technical community to 300+ members fostering the spirit of technological innovations.

IEEE Computer Society | *Technical Content Writer*   Mar- 2023 – Mar- 2023
- Wrote 20+ Blogs on Technical Topics, such as Open Source Softwares, JavaScript , Machine Learning Topics, Digital Marketing | [Blog Website](#)