Samundar Singh

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Education

College of Engineering Guindy, Anna University **Aug 2019 – June 2022**
Master of Computer Application – **9.3 (CGPA)** Chennai, Tamil Nadu

Ranchi College, Ranchi University **July 2015 – June 2018**
Bachelor of Science (Computer Application) – **77%** Ranchi, Jharkhand

Experience

Caterpillar Inc. **Aug 2022 – present**
Frontend Developer Chennai, Tamilnadu

- Expertly utilized **Angular** Framework and **Material UI** to develop and implement multiple modules for a Caterpillar business application, focusing on creating highly reusable components that enhanced modularization and streamlined development processes.
- Supported the creation of a framework (wow-framework) owned by Caterpillar that helps developers to create various modules, resulting in an 80% reduction in work. Developers only need to import this framework and integrate their modules with the proper API. Additionally, assisted in designing request forms with edit and view options based on the payload.
- Improved the Data Management system and addressed security issues identified during the bug bounty program by implementing encryption in HTTP protocols (using the existing cryptojs npm package) to hide data from URLs and payloads. Resolved low-level and mid-level bugs, enhancing the system's security by 90%.

Internship **Jan 2022 – July 2022**

- Engineered real-time dashboards for mining machinery using **Angular**, **live sockets**, and **Plotly**; reduced operational costs by 30% and enabled **keyboard interaction** for improved control in dusty environments.
- Designed a report creator module that uses drag-and-drop actions to create components dynamically. Users can create machine reports and send the status in the form of various graphs and tables to the admin or client.

Project

Kisan Seva | **Python**, **Angular** (webapp) **Link**

- Developed a web-based application using **Angular** that uses a machine learning algorithm to predict yield, temperature, fertilizer requirements, and other factors to maximize crop yields.
- Implemented **linear** and **multiple regression** models to enhance predictive analytics. Integrated the **Plotly** library to create interactive charts and graphs, improving user engagement by 90% and boosting **data visualization** capabilities. Achieved an accuracy of 93% after cleaning the outliers. Additionally, for every predicted outcome, the results are appended to the model's training data via a simple feedback form, which will further increase the model's accuracy.

Result Management System | Apache NetBeans, **Java**, **postgres**, Java-fx **Link**

- Developed an app that assists with marks distribution and attendance management for our college. Faculty can update marks and attendance, and students can view their results.
- Written **20+ SQL queries** for inserting and retrieving data from multiple tables during request.
- This app performs basics **CRUD** operation and save the result in pdf format.

Electronic Medical Record | **Blockchain**, Ethereum **Link**

- Created a D-App which is using **Ethereum** (**peer-to-peer)** network to store the medical records of patients in **IPFS** file system. This make the application secure and reliable.
- This app also supports instant insurance claim in form of ether directly to user wallet. After verification from doctor the amount is claimed. This makes this app 90% secure and faster in terms of claim process.
- Used **metamask** wallet for instant credit of the amount that reduce the time for approving insurance.

Technical Skills

Languages: **Python**, Java**,** JavaScript
Databases: Relational (**postgres**), NoSQL (MongoDB), Oracle,
Frameworks: **Angular**, Nodejs, MVC, Event-driven, Restful APIs, **Django**
Additional Skills: **Problem-Solving**, Data-structure and Algorithms

Achievement

- Solve 600+ question in GeekforGeeek, leetcode and hackerrank.
- Secure 6th rank among 200 participants in hackathon (Niral) held in Anna university.