Siddhartha Kumar Singh

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EDUCATION

Indian Institute of Technology Guwahati, India
Bachelors of Technology in Civil Engineering

Jul 2020 - Current
GPA: 7.7/10.0

EXPERIENCE

NTT Advanced Technologies, Japan
FPGA and Computer Networks Engineer, Internship

May 2023 - July 2023
Tokyo, Japan

- Utilized **Verilog** programming language to implement an **FPGA**-based solution for **network traffic analysis**
- Designed a circuit to **filter** and **segregate** relevant **TCP/IP protocols**, enhancing the efficiency of subsequent analysis
- Successfully integrated methods to **exclude** out **invalid packets** from the **network traffic**, thus increasing the speed of communication.

Aakash, BYJU'S
SWE, Internship

May 2022 - Oct 2022
Remote

- Contributed to the development and successful release of product called ACE, a groundbreaking virtual classroom experience, catering to a user base of **0.25 million** students worldwide
- Developed some of the vital features like **service requests, Fees and Payment and real-time doubt-solving chat feature** using **Next.js** and integrated **Web Engage** for highly targeted communication strategies
- Utilized **React Query** and **Redux** for efficient state management and **addressed** critical bugs like **Cross-Browser Compatibility and Inconsistent Rendering**, enabling my team to meet the sprint deadline ahead of schedule.

FosterHealth.AI
SWE, Internship

Oct 2023 - Nov 2023
Remote

- Developed **React** application, leveraging **LLM model** to generate first draft of clinical notes for a patient.
- Implemented **cache** using **local storage** and created dummy API call method to strategically mitigate the frequency of **OpenAI API** calls during development, thereby **optimizing resource usage** and **minimizing costs** for the company.
- Implemented conversation recording feature and **generated transcript** which served as input to LLM model

Agrivision4u
React Developer, Internship

Jan 2022 - March 2022
Remote

- Used **React.js Componentization** method and created reusable components using **SOLID** principles, that made the codebase easier to maintain and understandable.
- Developed a user-centric **examination feature**, providing an interactive platform where users can seamlessly take assessments, managed state for questions attempted, fostering a more intuitive and engaging examination process.
- Standardized all output with **responsive and mobile-first** approach and strategy increasing the engagement by **20%**

PROJECTS

SecureNet
SIH'23, Finals Submission

Nov 2023 - Dec 2023
Github

- Developed an Android application using **Kotlin** that detect malicious apps present in users phone by performing static analysis on installed apps and dynamic analysis in background tracking malicious network activities
- Extracted features like Permissions granted to an application, and passed the **APK** of installed application and processed it using **MobSF** for **malicious signature, pattern or string detection**.
- Developed **APIs** using **FastAPI** and utilized **Google Gemini** to generate **summarized reports** for regular users, making complex reports more understandable. Additionally, provided **suggestions** based on the generated reports.

SmartRoute
Inter IIT Tech Meet 11.0

Jan 2023 - March 2023
Github

- Led the Frontend team for development of an end-to-end platform with a focus on last-mile delivery, encompassing package scanning, rider-specific bag creation, and optimized route planning for delivery personnel.
- Integrated Google Maps and added feature where dynamic pickup points can added or removed from routes

ACHIEVEMENTS

Inter IIT Tech Meet 10.0	secured **1st rank** among **23 IIT's** in high prep problem statement	2022
Finalist SIH'23	Secured position among **top 4 all over India** in **Smart India Hackathon, 2023**	2023
Publication on FPGA-Insight	Highlighting my strong experience and view in FPGA and its transformative potential	Link

TECHNICAL SKILLS

Programming languages: C++, C, JavaScript
Backend Technologies: Node js, FastAPI
Mobile Development: Native Android*

Frontend Technologies: ReactJS, Next.js, Html, Css
Database Management: Mongo DB, MySQL
Miscellaneous: Git/Github, Linux

RELEVANT COURSEWORK

Computer Science: Data Structures and Algorithms, Software Engineering, Computer Networks
Development: Full-Stack Web Development with React Specialization, Modern Android app architecture

POSITIONS OF RESPONSIBILITY

Web Development Head, Coding Club IITG:
Represented IITG in various hackathons and events, build projects solving real life issues inside campus

2021 - 2022

Chief Organiser, Technothlon:
Conducted international level Olympiad, maintained a SQL database of 50k+ students worldwide

2022 - 2023