Sudeep Surendra Rawat
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EDUCATION

State University of New York At Binghamton (**GPA – 3.7**) **Aug 2021 – May 2023**
Masters in Computer Science

University of Mumbai **Aug 2016 – May 2020**
Bachelors in Computer Engineering

PROFESSIONAL EXPERIENCE

Software Engineer | Marlabs, New Jersey **Jun 2023 – Oct 2024**
- Developed responsive web applications using **HTML**, **CSS**, **JavaScript** and **React** to create seamless user experiences across devices.
- Collaborated closely with cross-functional teams including **UX/UI** designers to create appealing and user-friendly interfaces while actively participating in daily stand-ups and **Agile** practices to foster smooth project progress with effective communication.
- Integrated **RESTful** APIs and third-party services to expand application functionality and improve user interactions.
- Assisted in optimizing web applications for better performance, ensuring speed and **scalability** across different environments.
- Used **MySQL** for secure data retrieval and display within the application, ensuring data accuracy and integrity.
- Actively participated in code reviews and contributed to resolving front-end issues to maintain high code quality and stability.
- Conducted **unit** and basic end-to-end tests on **UI** components to confirm functionality and improve reliability.

PROJECTS

Toxicity Analysis on Social Media **Jan 2023**
- Designed and implemented a comprehensive system using **Python** scrapers to collect and process sports-related data from diverse social media platforms, including Twitter, Reddit, and YouTube, for a month-long period.
- Implemented robust data storage methodologies using a **NoSQL** database **(MongoDB),** ensuring efficient organization, retrieval, and scalability capabilities, thereby facilitating seamless data analysis processes.
- Conducted sentiment and toxicity analysis on the accumulated data utilizing the **BERT** model, effectively categorizing, quantifying, and interpreting negative sentiment and toxic content within the collected information, facilitating comprehensive insights.
- Employed **Matplotlib** to create dashboards with insightful visualizations, including histograms, scatter plots, and heatmaps, providing a comprehensive overview of sentiment trends and toxicity levels across different social media platforms.

Ecommerce Website **Aug 2022**
- Developed a user-centric online marketplace with a responsive and intuitive front-end using **TypeScript**, **React.js** and **Redux** adhering to **Object-Oriented Programming (OOP)** and **SOLID** design principles to enhance customer interaction and navigation.
- Leveraged **ECMAScript (ES6+)** features like arrow functions, template literals, and async/await for enhanced code readability and efficiency, thereby contributing to a smoother development process and improved overall performance.
- Utilized **AWS S3 (Simple Storage Service)** for efficient storage of static assets, optimizing performance and scalability.
- Implemented robust data storage and retrieval mechanisms using **DynamoDB**, effectively enabling users to explore and find products through a meticulously crafted product catalog and intuitive search functionality, enhancing the overall user experience.
- Successfully deployed the front-end technologies on **AWS EC2** for reliable and scalable performance.
- Implemented secure access to **REST APIs** using **AWS IAM and API Gateway**, along with user security measures using **AWS Cognito** for enhanced **authentication** and **authorization** processes.

Pipeline Instruction Decode Simulator **Feb 2022**
- Implemented a three-stage **pipeline** (**Fetch**, **Decode**, **Execute**) in **C** with smooth flow and one **instruction** per cycle, without stalling.
- Supported nine different arithmetic operations such as **add**, **sub**, **mul**, and **div**, executed across 16 integer **registers**
- Managed multi-cycle execution for complex **instructions** like multiplication (2 cycles) and division (4 cycles), optimizing throughput.
- Developed the **pipeline** system without data, control, or structural **hazards**, utilizing dual read ports and a single write port for efficient instruction execution. Conducted thorough validation using Unix-based **diff** commands to ensure output accuracy.

SKILLS

Languages – Python, C, C++, Java, JavaScript, jQuery, TypeScript, PHP, Perl, HTML5, CSS3, SQL
Databases and Frameworks – MYSQL, MongoDB, Django, Spring Boot, Spring MVC, React, Node.js, Junit, Express

ACHIEVEMENTS

Extra-Curricular
District Level Chess Player, Undergrad Final Year Project Published in IJSRCSEIT