Divyateja Pasupuleti

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Education

BITS Pilani, Hyderabad Campus — 9.71/10 CGPA
Bachelor of Engineering in Computer Science — *Hyderabad, Telangana, India*

Experience

Member of Technical Staff Intern — 05/2024 – PRESENT
Devrev — *Python, Docker, Kubernetes, Golang, Rego*
- Optimized a retrieval augmented generation pipeline to handle tabular data in unstructured file formats, boosting the answering rate from 70% to 80% and improving correctness from 37% to 48%.
- Leveraged text parsers, vision transformers, and LLM models to ensure accurate extraction of textual information from diverse sources such as pdfs, images and html files.
- Released an internal LLM tool for access to AWS bedrock models for access within the organization in order to optimize costs.

Summer Intern — 05/2023 – 07/2023
Indian Institute of Remote Sensing, ISRO — *Python, Google Earth Engine*
- Analyzed spatial-temporal flood patterns in the Assam Valley from 2015 to 2020; managed data acquisition, pre-processing, and applied thresholding and image segmentation algorithms to identify and delineate flooded regions.

Web Developer — 08/2022 – 09/2022
Acoustic Sensing and Imaging Laboratory, Arctic University of Norway — *Next.js, Python*
- Curated and organized a database of 50 research papers and publications from Google Scholar using web scraping techniques, streamlining access to the lab's research for ongoing projects.

Full Stack Developer — 12/2021 – 06/2022
Teenage Concerns — *React.js, Graph QL, WebSockets*
- Developed a full-stack application that enabled anonymous user registration and mentor assignment, facilitating over 200 users to discuss personal and mental health topics, supported by a ML-based tailored matching system.

Technical Skills

Amazon Web Services, Apache Kafka, Docker, C, C++, Golang, Graph QL, Java, Javascript, Kubernetes, Message Queues, Next.js, Node.js, Python, Pytorch, React, React Native, Rego, Rust, Tensorflow, Typescript, WordPress, Postgres, Sqlite, MySQL, MongoDB, Redis Database, Integration Testing Frameworks, Spring Boot, Nginx

Projects

Pascal Compiler | *yacc, lex, C, bison, flex*
- Developed a Pascal compiler that implemented essential language features, printed parse trees, performed syntactical and semantic analysis, and converted code into three-address code.

Gedditdone. Collaborative Pickup App | *MongoDB, Express.js, Next.js, Node.js*
- Facilitated a peer-to-peer request and delivery system to streamline item procurement from various places on campus, addressing coordination challenges and achieving a 50% reduction in wasted time for students in the campus for getting things done.

Secure Quiz App | *Next.js, React Native*
- A secure quiz app system capable of detecting malpractices and auto-submitting responses by monitoring tab and window changes to uphold assessment integrity by leveraging browser DOM controls and used for daily exit tests by over 500 students.

Handouts For You | *Next.js, Python*
- A cross-campus tracking system for sharing internship and placement opportunities and CTCs and offering access to 3200+ course details, 600+ course reviews, 100+ course resources, and 100+ grading charts catering to about 10000 students across campuses.

Oopsie | *React.js, Spring Boot, Java*
- Engineered a scalable, containerized web application for order management, real-time tracking, and inventory control; enforced role-based access with Spring Security and MySQL, boosting security by 40%.

Positions of Responsibility

Technical Team Lead — 06/2023 – 07/2024
Student Welfare Division — *BITS Pilani, Hyderabad Campus*
- Developed a real-time room allotment web portal, automating 90% of the manual process and ensuring equitable room allotment.
- Launched a food ordering application for 4000+ campus students, enabling remote food orders from canteens and driving 125,000 orders within the first semester of release.

Joint Secretary — 07/2022 – 05/2023
Automation and Robotics Club — *BITS Pilani, Hyderabad Campus*

Patents and Publications

Malware Analysis Using Transformer Based Models: An Empirical Study | 21st International Conference on Security and Cryptography
- Used Language models to categorize whether an app is malicious or not leveraging graph neural networks and sequence based transformer models.

Remotely Operated Autonomous Life-Saving Buoy System with Image Recognition Technology | Patent No. 559374
- The disclosure proposes an autonomous life-saving buoy system that tracks the victim's location and shares the images and location with rescue personnel or devices via a mobile application, facilitating timely rescue operations during natural calamities.