NISHANTH RAVULA

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SUMMARY

Result-driven Software Engineer with 3+ years of experience designing scalable systems and cloud-native solutions. Skilled in backend development, cloud architecture (Oracle DB, GCP), and CI/CD automation. Proven track record of improving system performance, reducing build times, and delivering user-centric web solutions.

EDUCATION

University at Buffalo, The State University of New York
Master of Science in Computer Science and Engineering, GPA : 3.5/4.0 **Dec 2023**

Sri Indu College of Engineering and Technology
Btech in Computer Science and Engineering, CGPA : 8.6/10.0 **September 2021**

TECHNICAL SKILLS

- Programming Languages: JavaScript, Python, C/C++, Java,
- Skills: Web Development, Data Structures and Algorithms, Machine Learning, LINUX, Computer Networks.
- Frameworks/Libraries: React.js, Redux, Django, Flask, Android, TensorFlow, Axios, RestApi's.
- Databases and Cloud: Oracle DB, MySQL, PL/SQL, MongoDB and GCP.
- Tools: AdobeXD, Figma, Solr, GIT, Postman, Visual Studio, IntelliJ, Jupyter, Jenkins, Docker, Microsoft Office, Salesforce, Power BI, Excel.

EXPERIENCE

Software Developer, Dollar General **April 2024 - present**

- Managed Oracle Database for backend operations, ensuring high performance and data integrity. Designed and implemented MongoDB solutions for displaying backend data, optimizing queries and data retrieval processes.
- Ensured seamless integration of data between Oracle and MongoDB, maintaining data consistency and reliability.
- Implemented JSON schema-driven validation in MongoDB to standardize input structure from frontend, reducing user-side data errors by 40%.
- Developed and maintained CI/CD pipelines, automating build, test, and deployment processes to enhance development efficiency and reduce errors.
- Collaborated with cross-functional teams to gather requirements, design solutions, and troubleshoot issues, ensuring timely project delivery. Conducted performance tuning and optimization of database queries, improving system responsiveness and user experience.

Assistant System Engineer, Tata Consultancy Services **July 2021 - July 2022**

- Built and deployed deep learning models for autonomous vehicle perception using TensorFlow and Python.
- Led a team of 5 data annotators, managing quality control and annotation pipeline efficiency. Improved model accuracy by 20% through better training data, model regularization, and hyperparameter tuning.
- Deployed models in Azure Cloud using virtual machines and managed ML lifecycle using Azure ML Services.
- Created end-to-end training workflows, including preprocessing, feature extraction, and evaluation scripts.
- Ensured compliance with client SLAs by delivering 30% manually annotated and verified training data.
- Continuously optimizing the annotation workflow to achieve maximum efficiency and precision. Collaborating with fellow machine learning engineers and data scientists to ensure annotated data adheres to project specifications and standards.

Web Developer, Halfway **February 2020 - June 2021**

- Designed and implemented responsive front-end features using React.js and Next.js frameworks. Integrated Google OAuth and REST APIs to streamline user authentication and data flow.
- Enhanced page performance by 35% through component-level optimizations and code-splitting.
- Collaborated with UI/UX designers using Figma and AdobeXD to translate mockups into production-ready code.
- Implemented Redux for state management and ensured a smooth user experience across all devices.
- Built reusable components and introduced best practices in testing, accessibility, and cross-browser compatibility.

Frontend Developer (Internship), PrimeFort **October 2019 - January 2020**

- Reactjs.
- Determined structure and design of web pages and ensuring user experience determines design choices.
- Created features to enhance user experience and build reusable code for future use.

PROJECTS

- **ChatBot** : Created application used to conduct an online chat conversation via text or text-to-speech. Deployed ReactJs for frontend and connected to backend deploying Flask API. Utilizing data gathered from Reddit and chitchat with the PushShift API, based on the Okapi BM25 model. By employing a logistic regression model, the chatbot retrieves the pertinent results from the relevant index. The appropriate result is selected among the relevant results retrieved based on cosine similarity. Added a faceted search capability to further limit the chatbot's ability to communicate to a specific Reddit topic.

- **Vehicle detection and tracking using Machine learning algorithms:** Developed a vehicle detection and tracking system employing advanced algorithms such as Support Vector Machines (SVM) and Decision Trees. Leveraging the power of these algorithms, I implemented a robust framework that accurately detects and tracks objects, specifically focusing on vehicles. By harnessing the capabilities of machine learning, I optimized the system's performance, achieving high precision and recall rates. This project showcases my expertise in algorithm selection, feature engineering, and model evaluation, emphasizing my ability to deliver state-of-the-art solutions in the field of computer vision.

- **Video chat Application:** Developed a simple and efficient platform that enables users to engage in face-to-face conversations. Leveraging the power of technologies like PeerJS, WebRTC, and Node.js, I created a seamless user experience for real-time communication. This project involved implementing peer-to-peer connections, enabling high-quality video and audio streaming, and ensuring data security. By utilizing these cutting-edge technologies, I successfully built a robust video chat application that facilitates effortless and immersive virtual conversations.