MRUNAL ANANT KAKIRWAR

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EDUCATION

California State University, Fullerton   Fullerton, CA
Masters in Computer Science - 3.7/4   *Jan 2024 – Dec 2025*
Coursework: Advanced Database Management, Data Structures and Algorithm Engineering, Software Design and Architecture, Web-backend, Machine Learning

TECHNICAL SKILLS

Programming Languages: Python, C/C++, Java, SQL, AWS RDS, HTML/CSS, Bootstrap, Javascript, Shell Scripting
Frameworks: Flask, FastAPI, AWS, Linux/Unix, React, Redux, Node.js, Express.js, MySQL
Developer Tools: Git, GitHub, Postman, Oracle, VSCode, AppDynamics, Splunk, Jenkins, JIRA, ServiceNow

EXPERIENCE

High Performance Computing(HPC) Student Assistant   Mar 2024 – Aug 2024
California State University, Fullerton   *Fullerton, CA*
- Configured scripts with SLURM for job scheduling and load distribution across 4+ CPU nodes
- Executed distributed computing tasks using **Python**, MPI reducing execution time from 3 hours to 15 minutes—a 92% decrease in runtime
- Utilized Python and shell scripting to streamline server-side operations, reducing manual intervention

Software Engineer   Sept 2020 – Dec 2023
HSBC Technology   *Pune, IN*
- Crafted clean and dynamic code using **React and Python**, aligning with business objectives and enhancing the customer service experience, delivering 12+ successful projects.
- Built reusable code with javascript and typescript libraries like **lodash, formik, redux**, and **chart.js**, reducing development time by 25%.
- Implemented **CI/CD** pipelines using **Jenkins** for seamless deployment in both production and non-production environments, improving integration efficiency and reducing deployment errors by 30%.
- Automated testing scripts, conducted root cause analysis, and debugged issues with **cross-functional** teams, applying **Agile methodologies** to cut issue resolution time by 15%.

LEADERSHIP EXPERIENCE

Teaching Associate: Teaching Introduction to programming course to **30+ students** covering fundamentals of C/C++ & Python.
Undergraduate Research Mentor: Mentored 3 undergraduates in the URE24 Project RAISE Program on mobile app development, machine learning, and delivering successful outcomes within tight timelines.

PROJECTS

SparkHealth: Streamlining Nurse Stress Management | *Python, FastAPI, React, AWS*   Mar 2024 - May 2024
- Developed a system to predict nurse stress levels from biometric data using **machine learning** models and processed large datasets using **AWS EMR** with **Hadoop** and PySpark.
- Utilized parallel processing techniques with Hadoop and **PySpark** for data processing, creating dashboards for enhanced data insights. Processed over 11.5 million entries in 35 seconds.

Go Green: Sustainable Delivery Platform | *MongoDB, Express.js, React.js, Node.js*   Jun 2024 - Aug 2024
- Developed application connecting travelers with nearby packages, using **Node.js** and **Express.js** for building APIs, implementing HTML and CSS with responsive design principles and **Git** for version control.
- Designed a geolocation-indexed, scalable **MongoDB** schema for effective, real-time package matching.

LearnHub - Canvas Like Learning Platform | *Angular, Python (Flask), AWS, PostgreSQL*   July 2024 - Sept 2024
- Built a full-stack learning platform with **Angular** and **Flask**, enabling real-time collaboration, course management, and grading workflows, improving user engagement for students and educators.
- Deployed on **AWS** with **PostgreSQL** for database management, optimizing scalability, ensuring high availability during peak usage.