DINISHA REDDY

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EDUCATION

San Diego State University Aug 2025 – May 2027
Master of Science in Computer Science
Coursework: Analysis of Algorithms, Principles and Techniques of Data Science, Computer Networks and Distributed Systems

Gandhi Institute Of Technology And Management July 2021 – Apr 2025
Bachelors of Technology in Computer Science **GPA:** 8.9/10

SKILLS

- **Programming:** JAVA, Python, JavaScript (ES5/ES6), SQL, C, C++, HTML, CSS
- **Frameworks:** React, Node.js, Spring Boot, Scikit-learn
- **Software Development:** Advanced Data Structures, Algorithms, object-oriented programming, Distributed Systems, Networking,Microservices
- **DevOps and Cloud Tools:** DevOps, AWS, Docker, Jenkins, Kubernetes, CI/CD
- **Systems & Tools:** Linux, Git, GitHub, GitLab, JIRA,Selenium, PyTest, Microsoft Excel, PowerPoint.

EXPERIENCE

Research Assistant – PISCES Lab, SDSU Sep 2025 – Present

- Developed a **Digital Twin traffic simulator (RUTH)** using **Python** for orchestration and **Rust** for performance-critical routing, enabling real-time urban mobility modeling for smart city research.
- Scaled large-scale simulations across **multi-node HPC clusters** with OpenMPI for **distributed parallelism** and ZeroMQ for efficient inter-process communication, supporting dynamic traffic intervention testing.
- Enhanced simulation fidelity by integrating **OpenStreetMap road networks (OSMnx, GDAL)** and exporting high-volume Floating Car Data (**HDF5, Pickle**) for analytics and policy evaluation.

Software Engineering Intern, FluentGrid Jun 2024 – Aug 2024

- Developed **full-stack web applications** using Node.js and React.js, integrating JWT for secure authentication, Apache Kafka for real-time data streaming, and Elasticsearch for advanced search functionality.
- Refined and optimized **responsive React.js components**, improving user engagement by **15%** and reducing page load times by **20%**.
- Tuned and designed **SQL queries** for high-performance data retrieval (**30% faster execution**) while integrating MongoDB to manage unstructured datasets effectively.
- Deployed applications on **AWS** (EC2, S3, Lambda, RDS) and automated infrastructure provisioning using Terraform to ensure scalability and efficient resource utilization.

PROJECTS

Cyber Threat Detection using Supervised ML *(Team Lead)*

- Led a 4-member team to design end-to-end ML workflows using **Random Forest, XGBoost, and SVM** on large-scale cybersecurity datasets (**CICIDS2017, UNSW-NB15**), handling **3M+ records**.
- Improved attack classification precision by **15%** over baseline models, reducing false positives in threat detection and achieving up to **99.9% accuracy**.

DriveOps: Vehicle Rental & Operations Management System *(Individual)*

- Designed and built a full-stack rental and operations platform using **Spring Boot, REST APIs, SQL, and React**, streamlining workflows and improving user experience.
- Implemented a **Jenkins-driven CI/CD pipeline** with GitHub integration for automated deployments, utilized **Kubernetes** for scalable container orchestration, and integrated **ServiceNow** to automate incident creation.

Robust Brain Tumor Detection *(Individual)*

- Built and optimized **deep learning models** (**CNN, VGG16, ResNet101**) on **7,000+ MRI scans**, implementing ensemble learning to strengthen classification accuracy across tumor types.
- Increased diagnostic recall by **12%** compared to standalone CNNs, demonstrating scalable application of AI for healthcare imaging with **99%+ overall accuracy**.

Leadership & Activities

- Led a team of **10+ interns** to launch a **career-focused Instagram page** sharing job updates and alumni insights, and also conducted GitHub/AR/VR workshops under the **Directorate of Training & Competency Development**.
- Organized **EduYouth Meetup (50,000+ attendees)**, coordinating technical teams to deliver **scalable digital infrastructure** for live events.