Aaditya Vikram Saravana Bhavan

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Education

Carnegie Mellon University Pittsburgh, PA
Master of Computational Data Science (MCDS) *Dec 2026*
Planned Courses: Introduction to Deep Learning (PhD), Introduction to Machine Learning (MS), Foundations of Computational Data Science (MS), Data Science Seminar (MS)

PES University Bangalore, India
B.Tech in Computer Science and Engineering | Specialisation: Machine Intelligence and Data Science *May 2024*
GPA: 9.42/10.00
Relevant Courses: Data Structures and Algorithms, Computer Networks, Data Analytics, Big Data

Skills

Programming and Problem Solving: C/C++ (advanced), GoLang (advanced), Python (proficient), Java (moderate), SQL; **Knight at LeetCode (Top 2.75% globally)**
Data Science and Machine Learning: Pattern Recognition, Data Mining, Big Data Analytics, PyTorch, pandas, numpy, scikit-learn, TensorFlow, Keras, HuggingFace, NLTK
Software Development and Database: HTML, CSS, React.js, Express.js, Node.js, MongoDB Atlas, PostgreSQL, Database System Design, Performance Improvement, Server Monitoring
DevOps and Tools: Git, GitHub, Jenkins, Docker, Kubernetes, Grafana, Jira, Confluence

Experience

Cisco Chennai, India
Software Development Engineer at Catalyst Center *Sep 2024 – Jul 2025*
- Led the design and development of a telemetry middleware in Golang, validating data flow through Amazon AWS Athena to ensure reliable data collection for 10K+ customers; built Webex bots in Node.js to send real-time alerts on traffic thresholds and system metrics, reducing MTTR by 40%
- Directed improvements to orchestration services by resolving 50+ bugs across backend and UI, and standardizing API error schemas across 20+ microservices, applying distributed systems and algorithm design principles to improve platform stability by 35%

Zscaler Bangalore, India
Software Development Engineer Intern *Feb 2024 – Aug 2024*
- Reduced data size by 40% and accelerated transfers by 50% using protobufs; optimized database applications with Procedural Language/PostgreSQL Structured Query Language, improving database performance
- Secured RabbitMQ connections with HTTPS, implemented pseudo clustering, wrote IOCTLs, automated server functions using Python scripts, and achieved 95% unit test coverage using CMocka

Academic Projects

GAN-Based Multispectral Image Dehazing Bangalore, India
PES University *Jan 2023 – Apr 2024*
- Developed a GAN based model using TensorFlow, numpy, Python, and Pandas for multispectral image dehazing, applying pattern recognition and data analytics techniques to achieve significantly higher image quality than existing methods on the SHIA dataset
- Recognized with the Best Paper Award at ISMSI 2024 (Image Processing and Artificial Intelligence Track) for advancing state of the art methods in multispectral image dehazing

Yet Another Kafka Bangalore, India
PES University *Nov 2022 – Jan 2023*
- Created a Kafka replica with producer-consumer model using socket programming, JSON-based data storage, and efficient topic management
- Distributed data across multiple brokers for fault tolerance, applied Zookeeper for monitoring and automatic recovery, enabling seamless client subscriptions and improving server architecture

Plan Your Miles - Travel Website Bangalore, India
PES University *Sep 2021 – Jan 2022*
- Collaborated with a 4 member team to develop a dynamic web application using the MongoDB, Express.js, React, and Node.js (MERN) stack, applying database management and data analytics to capture client preferences and perform emotional analysis for personalized vacation planning
- Implemented user profiling and personalization techniques, demonstrating a 25% improvement in recommendation accuracy and a 30% increase in engagement metrics during project evaluations

Publications

- **Enhancing Multispectral Vision: A GAN-Based Dehazing Framework**, ISMSI 2024
- **A Pugnacious Comparative Study of Data Analysis Techniques for Wine Quality**, I2CT 2024
- **Android Malware Detection: A Comprehensive Review**, Research Advances in Network Technologies, 42