

Vishal Jeyam

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Education

Master of Science in Computer Science | University of Arkansas, Fayetteville
Bachelor of Science in Computer Science | University of Arkansas, Fayetteville

Expected Graduation: May 2027
Graduated May 2025

Skills

Programming Languages: Python, Java, C++, SQL, JavaScript, HTML/CSS
Frameworks & Libraries: PyTorch, TensorFlow, Scikit-learn, React
Data & Tools: Kafka, Elasticsearch, Spark, Git/GitHub, Tableau, Pandas, NumPy
Cloud & DevOps: Docker, Kubernetes, Azure

Work Experience

Teaching Assistant, University of Arkansas

January 2023 to Present

- Guided 20+ Programming Foundations I students to understand the course content through weekly labs and office hours
- Offered tailored assistance on programming assignments, lab exercises, and practice exam inquiries
- Provided feedback on coding assignments, helping students improve problem-solving and coding skills
- Introduced debugging practices (gdb, IDE tools) to teach systematic problem-solving in C++/Java

Undergraduate Research Assistant, Smart Agricultural & Food Engineering

May 2025 to August 2025

- Analyzed LiDAR and time-series video data to create dynamic facility maps
- Applied AI-based methods with a focus on data quality and reproducibility for actionable sanitation insights
- Operated and maintained an autonomous mobile robot, acquiring datasets for evaluating sanitation efficacy
- Conducted applied research exploring algorithm robustness and scalability in real-world environments

Undergraduate Research Assistant, Quantum AI Lab

January 2025 to May 2025

- Processed and optimized agricultural imaging datasets, and trained deep learning models in PyTorch to detect insect physiological features
- Refined algorithms and applied evaluation metrics to compare accuracy and reduce misclassifications across models
- Experimented with state-of-the-art architectures from research papers and GitHub implementations to determine best-performing approaches
- Documented experimental results and presented findings to faculty mentors

Undergraduate Research Intern, Washington State University

June 2024 to August 2024

- Processed multispectral and RGB imaging datasets, using SQL queries and Python pipelines
- Built and fine-tuned a YOLOv8 model in PyTorch to detect and segment wheat fields, improving performance from 40% to over 80% accuracy while reducing false positives
- Derived vegetation indices (SCI, GNDI) and applied evaluation metrics to assess model reliability, delivering predictive insights for long-term crop health monitoring
- Documented experimental findings and presented results to research mentors to guide future study directions

Software Engineer Intern, Arkansas Blue Cross and Blue Shield

June 2023 to August 2023

- Developed scalable ETL pipelines with Confluent-Kafka and Elasticsearch, integrating with Docker/Kubernetes on cloud workflows to support enterprise analytics
- Ensured timely and reliable data delivery by monitoring pipelines, troubleshooting ingestion issues, and optimizing workflow performance for production use
- Collaborated with cross-functional team members on cloud-based deployment strategies, contributing to reproducible and scalable enterprise solutions
- Designed Python-based data integration workflows with Kafka and Elasticsearch to support ingestion, indexing, and export of enterprise data