Ayush Jadhav

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EDUCATION

University of Wisconsin-Madison ***May 2025***
Bachelor of Science in Computer Engineering and Computer Sciences

Certifications: Stanford ML, IBM Agentic AI, NVIDIA AI Infrastructure, Google IT Automation

EXPERIENCE

Associate IT Analyst | WEC Energy Group ***May 2023 - Present***
- Built and maintained enterprise-grade C#/.NET-based backend services supporting outage management and dispatch workflows, handling validation, integrations, and high-volume operational requests.
- Led the cloud migration of on-premise HERE Maps to cloud-hosted platforms within PCAD, reducing operational risk and improving reliability for routing and dispatch workflows.
- Implemented monitoring, alerting, and observability with Dynatrace, creating dashboards and alerts that reduced diagnosis time during production incidents and improved system reliability.
- Refactored service logic and optimized database access patterns to eliminate redundant queries, improving request performance by ~20% and increasing system stability under production load.

AI & Machine Learning Researcher | UW-Madison, Georgia Tech, LLNL ***September 2024 - May 2025***
- Built AI/ML data pipelines in Python (Pandas, NumPy) to analyze 8,700+ hourly records of wildfire risk, transmission line loading, and grid operating conditions using the California Test System (CATS)
- Engineered features and trained SVM and Random Forest classifiers to model power shutoff decisions, demonstrating clearer decision boundaries and improved discrimination compared to risk-only threshold methods.
- Demonstrated that ML-based approaches reduce unnecessary load shedding while remaining an order of magnitude faster than optimization-based methods, enabling real-time decision making
- Evaluated and documented AI model performance, reliability and operational feasibility in energy systems.

Engineering Representative | Student Government - Associated Students of Madison ***March 2023 - May 2025***
- Represented students in university governance, contributing to policy, funding, and academic initiatives
- Led internal operations and coordination across committees, ensuring compliance with organization procedures and improving communication between student leadership and administration.

Software Engineering Intern | Asian Paints ***May 2022 - August 2022***
- Developed features for a 3D room visualization application that allowed users to scan interior spaces and preview furniture and layout configurations in real time.
- Implemented logic for room dimension handling, object placement, and rendering consistency to improve the accuracy of visual output and user experience

PROJECTS

Wischeduler - AI-Driven Scheduling & Optimization Engine
- Designed and implemented an AI scheduling engine that analyzes course data, time conflicts, prerequisites, and dependencies to automatically construct and adjust user schedules.
- Built scoring logic to optimize feasible schedules based on constraint satisfaction and usability, resulting in a system that outperformed baseline scheduling approaches and earned **1st Place** at the ECE Capstone Showcase.

Tally AI - Agentic AI Budgeting & Financial Tracking Application (AWS, Azure)
- Built a smart budgeting application with an AI agent that analyzes spending patterns, loans, and recurring expenses to generate adaptive budget recommendations, deployed on AWS (Lambda, API Gateway, S3).
- Integrated Azure AI services for natural-language interaction and intelligent expense categorization, emphasizing secure data handling and predictable performance in production workflows..

SKILLS

Languages & Development: Python, C#, Java, C++, SQL, React, HTML, REST APIs, Data Modeling
Machine Learning & Infrastructure: AWS, Azure AI Services, Docker, scikit-learn, PyTorch, TensorFlow, CI/CD