Yav Rohatgi

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EDUCATION

University of Massachusetts Amherst — Amherst, MA

Bachelor of Science in Computer Engineering (Honors), Minor in Mathematics; GPA: 3.82 — *Sep. 2021 – May 2025*
- Honors: Chancellor's Award (Merit Scholarship, $48000) and Dean's List (every semester)
- Thesis: AI Assisted Approach to Math Tutoring advised by Professors Lixin Gao & Andrew Lan
- Coursework: Artificial Intelligence, Machine Learning, Data Structures and Algorithms, Secure Distributed Systems, Operating Systems, Computer Networks, Linear Algebra, Probability, Statistics & Calculus

WORK EXPERIENCE

DevOps Engineer — Jun 2025 – Present

Sonet.io — *Amherst, MA*
- Develop AI bots with OpenAI API and browser automation to handle site logins, VM launches, client workflows and report generation, achieving 80% accuracy and significantly reducing manual work
- Automate image preparation using CI/CD pipelines including WinRM check, sysprep, VM generalize, SIG publish
- Build an alerting pipeline in Azure Monitor to detect downtimes over 60s and flag storage usage above 80%

Undergraduate Teaching Assistant — Sep 2023 – Dec 2024

University of Massachusetts, Amherst — *Amherst, MA*
- Helped 150+ students by conducting weekly office hours and debugging their Python & MATLAB assignments
- Assisted students by breaking down assignment problems into clear steps and explaining the question
- Handled course logistics such as grading, student coordination, and communicating common issues to instructor

DevOps Engineer Intern — May 2024 – Aug 2024

Sonet.io — *Gurgaon, Haryana*
- Cut manual setup time by 7% by engineering 5+ PowerShell scripts to automate installs on 50+ remote machines
- Increased log access speed by 8% by building Kubernetes monitoring scripts for 10+ applications across 3+ clusters
- Improved system and storage efficiency by 5% through logout scripts that deleted guest-created data

Software Engineer Intern — May 2023 – Aug 2023

Samsung SDS — *Gurgaon, Haryana*
- Boosted sentiment classification accuracy by 25% by developing a Python program for 50K+ product reviews
- Customized the VADER library to identify key product features tied to market shifts across 100+ smartphones
- Delivered insights to product teams that influenced market strategy and product improvement decisions

PROJECTS

AI Assisted Approach to Math Tutoring | *LLM Fine-Tuning, Prompt Engineering, RAG* — Sep 2024 – May 2025
- Achieved 90% accuracy on 5,000+ math problems by integrating N-shot prompting, Chain-of-Thought reasoning, and symbolic reasoning using Wolfram Alpha, which improved multi step reasoning
- Deployed a RAG system that helped improve BLEU by 11.6% for lecture-style question generation
- Discovered that 18% of generated problems were unsolvable, revealing internal failures in LLM reasoning

Sign Language Detection Gloves | *Machine Learning, Python, C++, TensorFlow, IMUs* — Sep 2024 – May 2025
- Captured high-frequency motion signals from 6-axis IMU sensors on each finger to enable detailed gesture inputs
- Processed motion data into discrete-time series timestamped via MCU clock to recognize sequential hand signs
- Reached 92% real-time classification accuracy by training a lightweight model with TensorFlow Lite

Compact LLM Architecture | *Machine Learning, JAX* — Sept 2024 – Dec 2024
- Built sequence prediction models (constant, linear, MLP, double-layer) to evaluate accuracy and tradeoffs
- Reduced loss by 66% by fine-tuning double MLP networks with SGD and improved text clarity
- Evaluated model depth, width, and learning rates to identify configurations that optimized speed and accuracy

TECHNICAL SKILLS

Languages: Python, C/C++, SQL, PowerShell, Bash
Developer Tools: Docker, Kubernetes, Git & GitHub, Azure, AWS
Libraries: TensorFlow, PyTorch, JAX, Scikit-Learn, Hugging Face, LangChain, Pandas, NumPy, Matplotlib
Certifications: Azure Fundamentals (AZ-900), pursuing Azure AI Engineer Associate (AI-102)