Yav Rohatgi

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EDUCATION

University of Massachusetts Amherst *Sept 2021 - May 2025*

- **Bachelor of Science in Computer Engineering (Departmental Honors) & Mathematics minor,** GPA: 3.82
- **Honors**: Chancellor's Award (Merit Scholarship, $48000) and Dean's list (every semester)
- **Coursework:** Artificial Intelligence, Machine learning, Data Structures and Algorithms, Secure Distributed Systems, Operating Systems, Computer Networks, Computer Architecture, Scientific Computing & Security Engineering

EXPERIENCE

DevOps Engineer *Jun 2025 – Current*

Sonet.io

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

DevOps Engineer Intern *May 2024 – Aug 2024*

Sonet.io

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

Teaching Assistant *Sep 2023 – Dec 2023*

University of Massachusetts Amherst

- Mentored 150+ students to improve code quality and robustness in Python and MATLAB scripting assignments
- Led weekly office hours and coordinated with faculty, improving class operations and student satisfaction for 25+ students

Software Engineer Intern *May 2023 – Aug 2023*

Samsung Data Systems

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

PROJECTS

LLM-Based Math Tutoring System with Professor Lixin Gao | AI, LangChain, Prompt Engineering & Hugging Face

- Achieved 90% accuracy on 5K+ math problems by combining N-shot, Chain of Thought, Symbolic Reasoning & RAG
- Boosted BLEU score by 11.6% over baseline methods on generated lecture-based math content
- Improved multi-step reasoning performance on MATH and GSM8K benchmarks using structured prompts

Sign Language Detection Gloves | Machine Learning, Python, C++, TensorFlow, IMUs & BeagleBone Black

Github Link: https://github.com/yavrohatgi/SignSpeak

- Captured high-frequency motion signals from 6-axis IMU sensors on each finger to enable fine-grained gesture input
- 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

- Built sequence prediction models (constant, linear, MLP, double-layer) to evaluate accuracy and architecture tradeoffs
- Reduced loss by 66% by fine-tuning double MLP networks with SGD and improved text clarity

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)