Pranav Varshney

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EDUCATION

University of Michigan — May. 2026
B.S; Computer Science, Data Science — Ann Arbor, MI

EXPERIENCE

Scale AI — Jul. 2025 - Aug. 2025
Software Engineering Intern — San Francisco, CA
- Interning on the Generative AI, AI Agentic Models Team

Amazon Web Services — May. 2025 - Jul. 2025
Software Engineering Intern — Bellevue, WA
- Architected a Go-based server that streamlines endpoint insights for 100+ developers across multiple service teams
- Reduced on-call response time by 30% via initializing a high-performance query system to collect endpoint metrics
- Optimized server with concurrent processing, achieving 200ms response time, handling 1000+ production requests

University of Michigan — Jan. 2025 - May. 2025
Machine Learning Researcher — Ann Arbor, MI
- Constructed twin platform with BatFish & Veriflow to analyze 500 network snapshots monthly for tree based CNN
- Enhanced dataset size by 250% by writing a framework that automates network snapshots, improving scalability

United Wholesale Mortgage — May. 2024 - Aug. 2024
Software Engineering Intern — Pontiac, MI
- Accelerated code quality by piloting change insights pipeline in C# & SQL to populate data lake & identify trends
- Normalized database structure (3NF), reducing data duplicates by 45% & expediting GCP migration by 3 weeks
- Delivered $20,000 Q3 savings by developing a random forest model in Python to classify loans as success or failure

Ratna Global Technologies — May. 2023 - Aug. 2023
Software Engineering Intern — Newark, CA
- Launched development of a car rental website, utilizing React & Node to create a user-friendly & scalable platform
- Automated support tasks by establishing an AI powered customer support bot, saving 5-10 hours of work weekly

PROJECTS

SD–WAN Analytics (2024 Cisco HackAIthon) — [Presentation](#)
- Strengthened tunnel KPI anomaly detection & network issue resolution, giving insights for network optimization
- Applied AI to analyze app usage, device health, & NWPI for root cause analysis & network anomaly remediation
- Forecasted network issues & scheduled NWPI trace with ThousandEyes tests to train AI for proactive repairs

Financial Applications of Quantum Machine Learning — [Research Paper](#)
- Analyzed Quantum ML model performance & scalability in portfolio optimization, fraud detection, & forecasting
- Proposed quantum-classical workflows for ML feasibility given bottlenecks in data encoding & training stability

Tennis Winner Predictor — [Website](#)
- Achieved 92% accuracy by developing a logistic regression & gradient boosting prediction model on 75k matches
- Engineered key predictive features including ranking differences, H2H ratios, tournament context, & surface type

SKILLS

Languages: C++, C, Python, Go, C#, R, HTML/CSS, Javascript, SQL, LaTeX

Technologies: Git, JIRA, Docker, MySQL, PostgreSQL, Flask, React.js, Astro.js, QisKit, Pandas, Numpy, TensorFlow

Concepts: Full-Stack Development, Mobile Development, Cloud Computing, Parallel Programming, Machine Learning, NLP, Computer Vision, Data Analytics, Big Data, Embedded Systems, Quantum Computing, Computer Security, Linux