Nicholas Graves

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Education

Oregon State University — Corvallis, OR
Bachelor of Science in Computer Science, Focus in Cybersecurity, GPA: 3.47 — *Sep. 2020 – Jun. 2024*

Oregon State University — Corvallis, OR
Master of Business Administration, Focus in Cybersecurity Management, GPA: 3.92 — *Jun. 2024 – Dec. 2025*

Skills

Security & Networking: Cryptography, Wireshark, Packet Analysis, Security Governance, Risk Assessment, IAM
Cloud & DevOps: AWS (EKS, S3, CloudFront, Elastic Beanstalk), Kubernetes, Docker, GitHub Actions
Programming & Tools: Python, Bash, C++, SQL, Linux, Git, Metasploit, Nessus, Autopsy

Projects

Cybersecurity Capstone Project | *AWS CLI, AWS EKS, Python, YAML* — Sep. 2023 – June 2024

- Led deployment of the BeaverCTF & BeaverCDS cybersecurity competition platform on AWS EKS, supporting **200+ concurrent users** during the DamCTF event.
- Improved cluster reliability and security by refactoring Kubernetes manifests and container configurations for modern EKS compatibility.
- Partnered with the OSU Security Club to design a scalable, fault-tolerant cloud environment, cutting deployment issues by **40%**.
- Gained hands-on experience with Python scripting, Kubernetes orchestration, and cloud security best practices.

PCAP Anomaly Analyzer | *Python, Pandas, PyOD, Ollama* — June 2025 – Present

- Developed a Python toolchain that parses PCAP/PCAPNG files and extracts structured network flows enriched with metadata.
- Applied unsupervised anomaly detection (Isolation Forest via PyOD) to flag suspicious traffic, reducing manual packet review time by **70%**.
- Integrated local LLMs (LLaMA 3.1, DeepSeek via Ollama) to generate **executive-ready incident summaries** of flagged anomalies.
- Enhanced detection accuracy by layering Retrieval-Augmented Generation (RAG) for context-aware analysis of network traffic.

Cloud-Deployed AI Prompt Evaluation Tool | *AWS, GitHub Actions, Flask* — June 2025 – Present

- Architected a cloud-native web application with static frontend on S3/CloudFront and dynamic Flask API backend on Elastic Beanstalk.
- Designed scalable infrastructure with load balancing, autoscaling, and health monitoring, ensuring high availability for **500+ monthly requests**.
- Automated multi-stage deployments with GitHub Actions CI/CD, reducing release time from hours to minutes.
- Hardened deployments by implementing least-privilege IAM roles and environment-isolated staging/production pipelines.

Leadership & Activities

Fraternity Leadership: Served as Academic Chair for Lambda Chi Alpha, managing study sessions, tutoring programs, and GPA accountability initiatives for 120+ members.
MBA Strategy Simulation: Led 4-person team in competitive business simulation; ranked in top quartile across 30+ teams.
OSU Security Club: Contributor to CTF events and cloud deployment strategy.

Certifications & Honors

Oregon State University Dean's List - 10 terms (2022-2025)
Best Use of Cloud Technologies Award Winner - Oregon State Engineering Expo (2024)
CompTIA Security+ - In progress (Expected January 2025)