

Al Muqshith Shifan

Applied ML / RL Developer • Systems Engineering • Research Assistant

+1 647-540-4866 mohamedshifan@ontariotechu.net linkedin.com/in/al-mohamed-shifan github.com/Al-Scripting

PROFESSIONAL SUMMARY

MSc Computer Science candidate specializing in **Software Design for AI/RL** with hands-on experience building DRL training infrastructure (multi-head PPO critics, custom PyTorch environments, persona-based reward systems) and programmable-network research systems on **Intel Tofino P4** silicon. CCNA-certified; comfortable in low-level Linux/Unix stacks. Looking to contribute to GPU-native ML tooling.

EDUCATION

Ontario Tech University <i>MSc in Computer Science – Software Design (AI/RL Focus)</i>	Oshawa, ON May 2026 – Present
Ontario Tech University <i>Bachelor of IT – Networking & Cybersecurity (Dean's List 2026)</i>	Oshawa, ON Graduated Jun 2026

TECHNICAL SKILLS

Languages: Python, C++, SQL, Bash, JavaScript (Node.js/Three.js), HTML/CSS, P4
ML / RL: PyTorch, Stable-Baselines3, Gymnasium, PPO, Crafter, TensorBoard, Hydra, NumPy, Pandas, Scikit-Learn
AI Systems & Web: Gemini API, Ollama, LLM prompt engineering, Computer Vision, Flask, REST APIs, Docker, Git
Networking & Sec: Intel Tofino P4, Wireshark, Nmap, Cisco IOS, Linux (Kali/RedHat), Vulnerability Assessment

WORK EXPERIENCE

Teaching Assistant – Networking I & Advanced Networking II <i>Ontario Tech University</i>	Sep 2025 – Present Oshawa, ON
Led weekly lab sessions for ~120 undergraduates across two networking courses, guiding hands-on Cisco IOS configuration of routers, switches, and stateful firewalls; mentored students through TCP/IP, VLSM subnetting, and routing protocol debugging in office hours.	
Network Administrator – Summer Research Assistant <i>Ontario Tech University</i>	Jun 2025 – Sep 2025 Oshawa, ON
- Engineered programmable-network research infrastructure on Intel Tofino silicon P4 switches, supporting faculty research on in-network telemetry and traffic analysis. - Authored custom P4 data-plane programs extracting per-flow header and timing telemetry at line rate, delivering the lab's first working Tofino-deployed implementation. - Diagnosed and patched recurring Linux kernel and driver issues across P4 control-plane servers, reducing reported system crashes by ~30% over a 3-month window.	
Cyber Security Analyst <i>YYC Beeswax Ltd</i>	Jun 2025 – Sep 2025 Remote
- Performed vulnerability assessments on a WooCommerce + Stripe e-commerce stack, identifying 15 exploitable issues across customer-facing endpoints with prioritized remediation steps. - Audited 30+ WordPress/WooCommerce plugins against CVE databases and authored a hardening checklist adopted as the engineering team's pre-deploy review gate.	
Networking Lab Technician <i>Ontario Tech University</i>	Sep 2024 – Jun 2025 Oshawa, ON
Cut lab network downtime by ~20% for 50+ daily users by isolating switching bottlenecks and reconfiguring VLAN trunking; maintained 20+ workstations and DHCP/DNS/NTP services, resolving Tier-2 tickets.	

PROJECTS

RIDGE – Reactive Inter-persona Dynamic Goal Engine <i>Python, PyTorch, Crafter, PPO</i>	2026
- Co-developed (with faculty co-author) a deep RL architecture for state-conditioned reward blending across three persona objectives (Explorer, Survivor, Craftsman) on Crafter, targeting the RLVG 2026 workshop. GitHub: Code-SorceryLab/RIDGE. - Designed a multi-head PPO critic (shared CNN encoder, three persona-specific value heads) trained jointly with smooth sigmoid weight blending over a 6-dim game-state vector to address PPO non-stationarity under dynamic reward weighting. - Built full training pipeline in PyTorch with TensorBoard logging, YAML configs, and a 4-condition × 5-seed × 1M-step experimental sweep against fixed-persona baselines.	
PEAK – Platformer Engine for RL Benchmarking <i>Python, Gymnasium, Stable-Baselines3, Hydra</i>	2025–2026
- Co-developed a deterministic high-performance DRL benchmarking engine with modular persona-based reward shaping, evaluating PPO agents across 11 custom 2D platformer stages with reproducible SMB1-style physics. GitHub: Code-SorceryLab/PEAK-DRL-Tool. - Built a Dual Spatial Hashing collision system (separate static/dynamic grids) achieving O(C) per-query cost and sustained 1000+ environment steps per second, making 10M-step training runs practical on single-machine hardware.	
Gestura – Gesture-Based Medical Screening <i>Python, Flask, CV, Gemini API, Three.js</i>	Jan 2026
Built at HackHive 2026 a non-verbal patient intake tool: Flask backend streaming real-time hand-tracking state to a Three.js 3D "digital twin" frontend, with Google Gemini converting gestures into SOAP-style clinician summaries.	
Certifications: Cisco Certified Network Associate (CCNA) 2024–2027 • TryHackMe 200+ Hours (2023–Present) • Dean's List 2024–2026	