

John Popovici

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Cybersecurity and Software Engineering masters student with a background in software development, high-performance automated testing, and machine learning integration. Proven ability to contribute to open-source tools and deliver technical solutions in fast-paced industrial environments and academic settings.

EDUCATION

- **Master in Cybersecurity and Cyber Defence** Class of 2027
University of Luxembourg - Luxembourg 18.9 / 20.0 GPA
 - ENISA EU Cybersecurity Skills Framework (ECSF)

Courses: Software Vulnerabilities, Intelligence Structured Analysis, AI and Cybersecurity, Security of Mobiles, Microkernel Based Systems, Cyber Policy, Cybersecurity Risk Management, Cybersecurity Tool for Threat Intelligence and Forensics
- **Bachelor of Software Engineering** Class of 2025
McMaster University - Canada 11.5 / 12.0 GPA
 - **Summa Cum Laude**; Principal's Award and University Senate Scholarship

Courses: Software Design, Software Testing, Computer Networks and Security, Scientific Computation, Databases, Computer Architecture, Information Security, Software Requirements and Security Considerations, Data Structures and Algorithms
- **Ontario Secondary School Diploma** Class of 2019
Newmarket High School - Canada 95.5 / 100.0 GPA
 - Awarded Principal's Honour Roll and Academic Distinctions

WORK EXPERIENCE

- **Project Developer** Oct 2025 - Present
University of Luxembourg (SnT SerVal) - Luxembourg
 - Enhanced the **Open Source AI Assessment Sandbox Configurator (AISC)** architecture by developing the plugin interface and full stack, improving framework extensibility for third-party developers.
 - Implemented an extensible suite of analysis plugins and 100+ metrics for the AISC tool, for automated evaluation of **AI model Performance, Trustworthiness, Robustness, and more.**
 - Architected Python PoC to facilitate seamless interfacing and simplified usage of seven leading foundational tabular ML models within a customized testing environment.
- **Multimedia Textbook Assistant** Jan 2025 - June 2025
McMaster University - Canada
 - Designed and evaluated interactive digital content for an open web development course textbook.
- **Teaching Assistant** Sept 2021 - Apr 2025
McMaster University - Canada *4 Semesters
 - Provided technical instruction, academic guidance, and grading for courses of 1000+ students.
 - Specialized in delivering complex concepts in **Engineering Project Design, Data Structures, Algorithms, and Web Development.**
- **Design Verification & Automation Developer** May 2022 - Apr 2023
Advanced Micro Devices (AMD) - Canada
 - Maintained and executed automated testing and simulation suite in **Python, Perl, Ruby, and Bash**, utilizing log analysis to identify and debug faults across 6+ parallel execution versions.
 - Optimized data ingestion process by developing automation to parse heterogeneous vendor data.
 - Managed **Perforce Version Control and Jira Issue Tracking** within a production environment.
 - Spearheaded the Intern Steering Committee, organizing large-scale \$2500 professional development events for 300+ interns. Collaborated with university partners in charity events to raise over \$4000.
- **Junior Programmer** May 2021 - Aug 2021
Valor Distributions - Canada
 - Developed and performed **Quality Assurance (QA)** for an inventory management system utilizing **Vue.js, Laravel, PHP and SQL Databases.**

TECHNICAL PROJECTS

- **Vulnerability Playtest** Summer 2026
Personal Project *GitHub*
 - Demonstration of vulnerability primitives such as Buffer Overflow and Injection Attacks.
 - Implemented **functional Proof-of-Concepts for CVEs** (eg. CopyFail) to explain exploit mechanics.
- **Microkernel Implementation** Spring 2026
Group Project *GitHub*
 - Architected a Priority Scheduler and Inter-Process Communication (IPC) on a NOVA skeleton.
- **Customizable Neural Network from Scratch** Summer 2025
Personal Project *GitHub*
 - Built a modular **Neural Network** engine using **Python and NumPy** for visualizing training.
 - Conducted comparative benchmarking against TensorFlow and implemented optimizations.
- **Personal Website** March 2025
Personal Project *Website; GitHub*
 - Created website using raw HTML, JavaScript, CSS on GitHub Pages and Resume in Latex.
- **Dice Duels: 3D Physics Online Dice Game** Sept 2024 - Apr 2025
Group Project *GitHub*
 - Implemented custom dice game using **Godot, Git Version Control, and GitHub Actions CI/CD**.
 - Documented engineering process and management compiled as Latex documentation.
- **Custom Microsoft Office Automation** Summer 2024
Commissioned Project
 - Implemented **Microsoft Office VBA macros and Python script** for workplace automation.
- **OpenAI GPT-3 Discord ChatBot** Summer 2024
Group Project *Report*
 - Implemented the **GPT-3 API** to develop a specialized Discord chatbot featuring sentiment analysis.
- **Space;Raze: Algorithm Competing Game** Winter 2019
Group Project
 - Developed a Java instructional physics game for battling custom algorithms for learning algorithms.

OTHER HIGHLIGHTS

- **Open Source Contributor**
 - **Pivotick**: Network graph library developed for tools such as MISP and FlowIntel.
 - **AISC**: AI Assessment Sandbox Configurator for evaluating and assessing risks in AI models.
- **Hackathon Participant & Mentor**
 - **Mentor**: Deltahacks 9 (2023)
 - **Participant**: hackathon.lu (2026), Bsides (2026), Deltahacks 7 (2021), TOhacks (2021)
- **Student Representative & Ambassador** Sept 2019 - Apr 2022
McMaster Engineering Society
 - Elected by the student body to represent program interests. Awarded **Council Appreciation Award**.
- **Director of Design & Manufacturing** Sept 2018 - June 2019
First Robotics Competition
 - Co-founded the local FRC team, leading the group to win two "Rookie Team of the Year" Awards

SKILLS SUMMARY

- **Languages**: English (Native), Romanian (Native), French (Intermediate)
- **Programming**: Python, Java, SQL, C/C++, PHP, JavaScript, Perl, Ruby, Bash, VBA, Verilog, GDScript
- **Tools**: Linux, MS Office, Git, Perforce, CI/CD, Jira, Regex, GDB, APKtool, Jadx, Wireshark
- **ML & AI**: Neural Network Architecture, TensorFlow, Pytorch, Numpy, ML Safety Metrics, Matlab
- **Cybersecurity**: Software Vulnerabilities, MISP, Risk Management, Threat Intelligence, Data Recovery