

RYAN J. SOWA

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EDUCATION

Master of Science in Engineering in Artificial Intelligence (MSE-AI) - Spring 2027 – Spring 2030 (Expected)

- University of Pennsylvania, Philadelphia, PA, United States

Bachelor of Science: Honors Software Engineering Major - Fall 2019-Winter 2022

- McGill University, Montréal, QC, Canada
- **GPA:** 3.74
- **Selected coursework:** Language-based Security, Artificial Intelligence, Software Engineering Project (Video Game Development), Discrete Structures, Algorithms and Data Structures, Programming Lang & Paradigms, Theory of Computation, Calculus (1-3), Linear Algebra

WORK EXPERIENCE

Software Engineer at Pegasystems: Waltham, MA, United States - Jan 2025 – Present

- Building scalable backend solutions for Pega GenAI Blueprint™, leveraging generative AI to transform business process automation.

Software Engineer at Cisco: Ottawa, ON, Canada - Jan 2023 – Jan 2025

- Played a significant role in the development and delivery of diverse projects, with a focus on the critical "sustainability" initiative. Collaborated effectively with Ottawa and San Jose teams, actively participating in both frontend and backend aspects of the software development lifecycle. Utilized React for frontend development and Java, Maven, Kubernetes, and SQL for backend functionalities. Corresponded with the test team to address and resolve bugs, ensuring a seamless user experience. Engaged in Agile methodologies, contributing to planning, analysis, testing, and ensuring successful outcomes across the entire spectrum of project requirements.

Software Engineer Intern at TEKsystems: Montréal, QC, Canada - May 2022 – August 2022

- Helped develop the TEKsystems.com website with Sitecore, an innovative web content management tool. Played an active role in developing client stories and SiteCore components, remediating website bugs, and writing unit tests. Engaged in Agile project team activities in support of the software development life cycle, including planning, analyzing, and testing software programs. Used HTML, CSS, Javascript, and C#.

Software Engineer Intern at SCYTHE: North Kingstown, RI, United States - Jul 2021 – Aug 2021

- Contributed to a leading platform for providing "a common environment for the build, development, and operation of adversarial emulation." Worked in an agile Scrum team, building an Electron application for module development using HTML, CSS, jQuery, and Node.js.

McGill University Artificial Intelligence Lab Researcher: North Kingstown, RI, United States - Apr 2021 – Aug 2021

- Developed a Python facial recognition system using One-Shot Learning methodologies. Further contributed to the lab's AI research by investigating and comparing facial recognition algorithms, including One-Shot Learning, Eigenfaces, and Linear Discriminant Analysis.

PROJECTS

- **Webex Smart Bot:** Collaborated in a hackathon team to design a Webex bot to improve Cisco team communication by answering repeated questions using RAG and PostgreSQL for context storage. Integrated OCR to extract and process text from images.
- **Swiss Pairings System:** Designed a UML diagram for a potential open-source replacement for SwissSys, then implemented it using HTML, CSS, and Javascript. Employed modular programming and diverse sorting algorithms for optimal functionality.
- **ElfenRoads Video Game:** Collaborated on a complex multiplayer video game featuring a game lobby, multiple rounds, and diverse editions inspired by the board game ElfenRoads. Utilized Git, Java, Spring Boot, and REST-APIs for development.
- **Colosseum Survival Agent:** Engineered an AI agent achieving competitive play against humans and other agents in Colosseum Survival. Employed a Monte-Carlo tree search algorithm for optimal move determination.

SKILLS AND CERTIFICATIONS

- **Technologies:** Java, C, Bash, C#, Python, OCaml, MIPS, JavaScript, MATLAB, React, Maven, Git, Spring Boot, Linux, Jira, SQL, Kubernetes, Agile development, REST APIs, JUnit testing, BDD testing, Pega
- **Certifications:** CompTIA Security+, Neural Networks and Deep Learning, Advanced Learning Algorithms, Pega CSA
- **Languages:** English (native), French (advanced), Mandarin (advanced), Spanish (intermediate), Russian (beginner)

ACHIEVEMENTS

- Congressional Award Gold Medal for Youth - 2016
- Bourses d'excellence en Sciences de l'informatique (Excellence Scholarship in Computer Science) - 2021
- President's Volunteer Service Award, with a special commitment to Education - 2016
- US Chess Federation National Master title; honored by the RI Chess Association and the RI Senate - 2016
- Highest rated chess player in Rhode Island; RI middle and high school chess champion; RI State Championship winner - 2014-2018