

# Ryan Saperstein

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## EDUCATION

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**Northeastern University**, Boston, MA

**B.S., Computer Science, Concentration in Artificial Intelligence**, GPA: 3.93 / 4.0 September 2021 - May 2025  
*Honors*: Summa Cum Laude

*Coursework*: Software Development, Programming Languages, Computer Systems, Web Development, Natural Language Processing, Machine Learning & Data Mining 1 & 2, Theory of Computation, Object-Oriented Design, Algorithms, Fundamentals of Computer Science 1 & 2

## COMPUTER KNOWLEDGE

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**Proficient**: Java, Python, Linux, JavaScript, TypeScript, Git, Jira, React, React Native, Racket, HTML/CSS

**Familiar**: Clojure, Scala, C, Kubernetes, Arduino, PostgreSQL, MySQL, MongoDB

**Interested**: Go, Rust, Machine Learning (neural networks, natural language processing, etc.), Robotics

## EXPERIENCE

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### Generate Product Development

Boston, MA

*Tech Lead*

August 2024 - December 2024

- Led a team of six engineers on a mobile app project for a client, including creating and assigning tickets, planning software architecture, and assisting development
- Implemented CI/CD through GitHub Actions

### Broad Institute of MIT and Harvard

Cambridge, MA

*Software Engineer Co-op*

January 2024 - June 2024

- Implemented support for a new WDL (Workflow Descriptor Language) spec in our [execution engine](#) alongside team
- Discovered a bug in our integration testing framework and rewrote it to accommodate a wider range of tests
- Implemented front end features and upgrades in response to feedback from key users

### VMware

Boston, MA

*Co-op Member of Technical Staff*

January 2023 - December 2023

- Increased efficiency by developing a workflow debugging tool that parses internal and external log bundles
  - \* Gathers key analytics, assessing long-term performance and locating new bugs and regressions
- Developed and tested additional features and bugs for VMware Cloud Director, VMware's flagship cloud service delivery platform, including upgrades and modifications to a RESTful API and PostgreSQL database

### Saperstein Software Solutions

Remote

*Owner and Software Developer*

March 2022 - Present

- Developed two mobile applications for a New Jersey based non-profit: the [Help App](#) and [RecoverWE](#)
- Implemented a React Native front end and Python/SQL back end to provide resources in an easily accessible format

### Northeastern University

Boston, MA

*Teaching Assistant for Fundamentals of Computer Science 1*

September 2022 - December 2022

- Held 4+ office hours per week to provide individual support and one-on-one tutoring to students
- Supported faculty by grading and assisting with labs each week

## PROJECTS

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### [Bazaar](#) (Clojure)

September 2024 - December 2024

- Implemented the board game *Bazaar* including automated game play with deterministic player strategies
- Developed a distributed system using client-server architecture, allowing players to interact in real-time across nodes

### [SigLo](#) (Python, OpenCV, MediaPipe)

February 2022

- Adapted a pre-trained neural network to identify hand motions to control a computer from afar
- Won HackBeanpot 2022 Most Technically Challenging Project

### [Image Processing Application](#) (Java, Java Swing)

June 2022

- Enables a user to load, save, and manipulate images, including flipping, resizing, and applying a filter