# JOSHUA NEGREANU

Computer Science, Mathematics, and Artificial Intelligence Student at Oregon State University Honors
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## SKILLS SUMMARY

**Languages** Python, C, C++, JavaScript, C#, Java, x86 Assembly, HTML, SQL, PHP, Node.js
- Intro to Artificial Intelligence (*A* search problems, adversarial search trees, pruning, Bayesian networks*)
- Machine Learning and Data Mining (*logistic regression, SVMs, neural networks, decision trees, ensembles, SVD*)
- Operating Systems 2 (*bootloader, virtual memory, paging, system calls, context-switching, multi-core, IPC*)
- Intro to Databases (*database design, queries, relational algebra, E-R schemas, HTTP protocol, server-side scripts*)

**AI Toolkits** NumPy, PyTorch, SciPy, Matplotlib, Pandas
- Thesis Research (*reinforcement learning, probabilistic inference, measure theory*)
- Machine Learning and Data Mining
- Intro to Artificial Intelligence

**Multithreading** CUDA, OpenMP, OpenCL, OpenGL, SIMD, MPI, DGX
- Intro to Parallel Programming (*Amdahl's Law, Moore's Law, functional decomposition, hyperthreading*)

**Industry** Agile development, Jest unit/UI-integration testing, Cypress end-to-end testing, GitHub Action workflows
- Software Engineering 1 (*requirements engineering, system modeling, software architecture, project management*)
- Software Engineering 2 (*version control, automated software testing, continuous integration/deployment*)

**Soft Skills** Orderly, flexible, reliable team member, disciplined, open-minded, precise communicator, creative, value diversity

## WORK EXPERIENCE

**Thesis Research: Attacks on Stochastic Dueling Bandits** *May 2024 – Present*
*Oregon State University College of Engineering*
- Analyze and conceptualize mathematical framework for action/reward poisoning algorithms within stochastic dueling bandits context (*reinforcement learning area used for online recommendation systems*) to develop algorithms more robust to corruption.
- Engage with and present at weekly graduate bandit reading group exploring linear, adversarial, etc. bandits and other RL problems.

**Operating Systems Learning Assistant** (CS 374) *Sep 2023 – May 2024*
*Oregon State University College of Engineering*
- Held office hours, tutored 40+ students, aided in debugging. Graded assignments, utilized shell scripts, communicated with professor.
- Assessed projects written in C spanning areas of multithreading, shell creation, file I/O, network protocols, cryptography, UNIX OS.

**Data Structures Learning Assistant** (CS 261) *Apr 2023 – Jun 2023*
*Oregon State University College of Engineering*
- Conducted biweekly grading demos for 30+ students. Displayed quick adaption to student code, assessed level of understanding.
- Mentored students with projects, met weekly with professor and assistants. Assignments on lists, trees, hash tables, queues, heaps.

**Gen Engineering Learning Assistant** (ENG 101) *Sep 2022 – Dec 2022*
*Oregon State University College of Engineering*
- Prepared and led recitations alongside fellow assistants. Mentored students on industry programs: COMSOL, MATLAB, Simulink.
- Maintained communication with professor and coordinated meetings regarding class structure and objectives. Graded assignments.

**Leadership Circle Volunteer for the Honors College** *Sep 2021 – Jun 2022*
*Oregon State University Honors College*
- Devised methods to improve diversity and inclusion in Honors College. Led group discussions, wrote detailed team meeting notes.

## EDUCATION

**Oregon State University** (Honors College, College of Engineering) *Sep 2021 – Jun 2025*
- *BS Computer Science (Artificial Intelligence)* GPA: 4.00/4.00
- *BS Mathematics (Applied)*
- *MS Artificial Intelligence (Accelerated Masters Platform, 2026 completion)*

**Catlin Gabel School** (High School) *Sep 2017 – Jun 2021*
- *FRC Robotics (Fabrication, Code, CAD)* GPA: 4.00/4.00

## PERSONAL INTERESTS

**Sports** Ultimate Frisbee Club (*Oregon State University*), Track (*Catlin Gabel varsity*), Tae Kwon Do (*instructor, demo team*)
**Outdoors** Rock climbing, hiking, running, mountain biking, snowboarding, kayaking, paddle-boarding, backpacking, camping
**Creative** Piano (*9 years, OFMC 3rd Gold Cup, Oregon Duet Competition Winner*), guitar, painting, drawing, music production