

# PATRICK PUNCH

## SOFTWARE ENGINEER

### SUMMARY

Enthusiastic advocate for sustainable technology, driven by a passion for collaboration to create innovative solutions that benefit both people and the planet. Excited to work on projects that foster an inclusive and welcoming world for everyone while driving the shift toward sustainable systems.

### CONTACT

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### EDUCATION

Oregon State University - Cascades · Jan. 2022 to Current  
B.S. Computer Science 2026

Oregon State University · Apr. 2025 to Current  
M.S. Computer Science 2027

### SKILLS

**LANGUAGES:** Python, Java, HTML, CSS, JavaScript, SQL, C, C++, Ruby  
**TEAMWORK:** Communication, Organization, Collaboration, Commitment, Leadership

### PROJECTS

Music AI  
Sept. 2024 to Current  
- A data representation for loading, storing, and manipulating symbolic music notation. This involves a powerful and flexible Python toolkit to allow the evaluation and generation of music using artificial intelligence and machine learning algorithms.

Bayes Network  
May 2024 to June 2024  
- Built a Naive Bayesian Network using Neapolitan's probability propagation algorithm to model relationships and infer posterior probabilities, showcasing applications in decision-making and predictive analytics.

AI Agent for Othello  
May 2024 to June 2024  
- Developed an AI agent that plays Othello using the minimax algorithm to determine optimal moves. Enhanced gameplay strategy through evaluation functions, demonstrating effective decision-making in adversarial environments.

Shortest Path with A\*  
Mar. 2024 to Apr. 2024  
- Implemented four search algorithms (BFS, Iterative Deepening DLS, Uniform Cost, and A\*) to find the shortest path between cities using command-line input and map file parsing. Analyzed efficiency and returned the optimal path and algorithm used.

### AWARDS

Oregon Army National Guard · NATO Overseas Service Ribbon  
July 2023  
- For meritorious service in support of the North Atlantic Treaty Organization's allied forces.

### EMPLOYMENT

Oregon State University - Cascades  
Computer Science Department  
Tutor · Sept. 2023 to Current

- Worked with students in person and remotely, in one-on-one and group settings to help them grasp key computer science concepts, like programming, data structures, and algorithms.
- Created personalized lesson plans to suit individual learning styles.
- Focused on building a supportive atmosphere that encouraged students to engage with the material.

Oregon Army National Guard  
Portland, Oregon  
Healthcare Sergeant · Oct. 2016 to Current

- Led and mentored a team of 5 soldiers as a small group leader during deployment to Eastern Europe; developed their skills and coordinated clinical rotations, ensuring the training and development of 24 soldiers.
- Developed lower enlisted soldiers, guiding their execution of mission-critical tasks, as well as soldier development and leadership skills in the Army.

Starbucks  
Bend, Oregon  
Shift Supervisor · Nov. 2022 to Current

- Revamped Barista deployment strategies, optimizing tasks and workflows, and ensuring adherence to money exchange protocols, food safety practices, and conflict resolution. Implemented store-wide workflow optimizations that led to a 10% revenue increase by improving drive-thru times.
- Orchestrated the deployment of Baristas to diverse roles, streamlined workflows, and ensured adherence to protocols for money exchange, food safety practices, and conflict resolution among coworkers. Optimized store workflow, resulting in a 10% increase in revenue through faster drive-thru times.

St. Charles Health System  
Bend, Oregon  
Emergency Technician · Oct. 2018 to Aug. 2021

- Provided basic life support care for over 1000 patients, and saved over 20 lives due to CPR training.
- Reorganized stocked ambulatory items, and maintained sanitary standards that surpassed requirements.
- Managed patient overflow sections, requiring on-the-spot decisions to triage patients and provide immediate care where necessary.

### VOLUNTEERING

Hacker Refactor Club · Treasurer  
June 2024 to Current

- Managed the budget and finances for the computer science club, overseeing fundraising and tracking expenses to support member activities.