

# JONAH WATTS

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**COMPUTER SCIENCE STUDENT SEEKING OPPORTUNITY TO CREATE CHANGE WITH  
BACKGROUND IN BOTH TECH AND SUSTAINABLE WORK**

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## TECHNICAL PROJECTS

### DIY Ray Tracer

- Developed a custom ray tracer from scratch, rendering 3D objects and scenes.
- Implemented advanced techniques like ambient occlusion and shape generation.

### AI Maze-Solving Robot

- Designed software to guide a robot through a random maze, to discover the layout of maze and solve the path from start to finish
- Implemented algorithms such as A\* and Dijkstra in Python to ensure efficient maze navigation, and a GUI to show the project the progress.

### Pacman in OpenGL

- Created a Pac-Man like game in open GL in 2D, and even a 3D navigation version.
- Focused on collision detection, sprite animation, and player controls in C++.

### Learning 8 Programming Languages in 3 Months

- Acquired proficiency in languages such as Python, Java, C++, JavaScript, Fortran, Swift.
  - Completed projects and coding challenges to demonstrate a strong grasp of syntax, paradigms, and best practices across multiple languages.
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## EXPERIENCE

### Software Intern, HP Inc.

*June 2021 – September 2021 | Remote*

- Developed internal video materials for HP systems.
- Reported directly to the Chief of Staff for Personal Systems Software, gaining insights into software product marketing and training.

### Software Intern, OX Transportation

*June 2022 – September 2022 | Kigali, Rwanda*

- Optimized data reporting and charging logistics for electric vehicles using data analysis techniques.
  - Helping to improve efficiency in managing compact vehicles.
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## EDUCATION

### **Bachelor of Computing Science**

*Trinity Western University, Langley, Canada*

- Focused on AI, Data Structures, and Algorithm Analysis.

### **Bachelor of Computing Science**

*The King's University, Edmonton, Canada*

- Completed coursework in Object-Oriented Programming, Intro to Calculus, and Real-Time Animation and Game Design.
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## OTHER SKILLS

- Proficient in Python, C++, Java, and JavaScript.
- Competent with OpenGL for game and graphical programming.
- Experience with Linux, Windows, and MacOS environments.
- Advanced skills in video production, audio mixing, and live event management.