

Joel Weber

Passionate Student



226-622-9943



joelweberdevelopment@gmail.com



Elmira, ON



[Linkedin](#)

SUMMARY/OBJECTIVE



An inspired computer science student and enthusiast who is committed to experimenting with what interesting things computers are capable of doing. These explorations include automated weeding, live text translation, magnetic acceleration, and using R to understand the distribution of prime numbers.

WORK EXPERIENCE



High air pressure systems for agricultural machinery installer

AgriBrink.Ltd | Arthur ON | June 2020 – July 2022

- Install and design complete air systems capable of inflating and deflating tires on tractors or large machinery to reduce soil compaction and increase crop yield.
- Acquired skills in welding, electronic control, fluid dynamics, plumbing, and manufacturing.
- Demonstrated problem-solving and mechanical engineering skills to adapt the system to any kind of agricultural with tires while ensuring the system could complete its operation in under 2 minutes.

HVAC Technician

Bostech Mechanical.Ltd | Arthur ON | July 2022 – August 2023

- Install and service heating and cooling systems for both residential and commercial applications.
- Specialization in geothermal heating as an alternative to conventional combustion furnaces.
- Gained a comprehensive understanding of mechanical systems with all their working elements and learned how to troubleshoot a complex system using problem isolation.

SKILLS



- Computer vision with OpenCV
- Python (3 years)
- C++ (5 months)
- Other languages: R, HTML/CSS, Java Script, Wolfram Language, Matlab
- Project management
- Comprehensive knowledge of mechanical systems
- Digital electronics and Arduino
- Software Environments: VS code, Eclipse IDE, R-Studio, Vim, Windows, Kali Linux, Virtual Box, Git, Github

EDUCATION



Name of School: Wilfrid Laurier University

GPA: 12/12

Degree: Bachelors of Computer Science

Associations:

Years: 2023 - 2027 (Currently in 1st year)

- Laurier Computing Society (participant in events)

City: Waterloo

Name of School: Listowel District Secondary School

Distinctions:

Degree: High School

Years: 2018 - 2022

City: Listowel

- Graduation in top 1% of students with 95% average
- Listowel Chamber of Commerce Scholarship
- Volleyball MVP and Captain

PROJECTS



Automated Weeding Implement for Organic Farming:

Description: Over 700 hours are invested in the development of a piece of agricultural machinery that automatically detects crop rows in the field and positions furrows to uproot weeds while leaving the desired plants. This is an ideal solution for organic farmers who are attempting to control weeds without herbicides. Though this project is still in the development phase the intention is to eventually sell and commercialize the product.

Acquired Skills:

- Computer Vision, Numpy
- Python
- C++
- Linear ray tracing
- Machine Learning
- Software testing

Years: June 2021 - Present

More Project Info: [Project Github page](#)

Personal Portfolio Website:

Description: This website that shows some further projects, goals and skills was programmed from basic HTML, CSS, and Javascript. It was created as a place to display projects and goals to potential employers while itself being a display of programming skill.

Acquired Skills:

- HTML / CSS
- JavaScript
- Responsive UI design
- Graphical Design
- Github version control

Years: October 2022 - December 2022

More Project Info: [Personal Portfolio Page](#)

3D Printer:

Description: Built an entire 3D printer from raw sheet metal and basic electronics. This was valuable work at the intersection of hardware and software along with basic knowledge of the generation of 3D designing, additive manufacturing and G-Code generation.

Acquired Skills:

- Arduino
- Digital electronics
- 3D modelling
- Fusion 360 design
- Mechanical engineering.

Years: December 2022 - Present