

Jacob Applebaum

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Education

Brock University (Sept 2021 - Dec 2025)

BSc of Computer Science (Honours), Minor in Physics

- Received the Faculty of Math and Science Indigenous Undergraduate Award

City University of Hong Kong (Fall 2024)

Student Exchange Abroad

- Received a Global Skills Opportunity Grant and the International Student Mobility Award

Workplace Experience

Behaviour Interactive (Summer 2023)

Montréal, Canada

Gameplay Programming Internship

- Worked in Unreal Engine 5 and C++ on "What the Fog" - a roguelike online co-op PC game with thousands of players [on Steam](#).
- Developed the prototype for a different, unannounced internal project in Unity, using C#.
- Used Scrum while working in a smaller team of 15-20 talented developers and artists.
- Created and completed code reviews for my own code as well as other programmers' code.

Evertz Microsystems Ltd. (Spring 2022)

Burlington, Canada

Facilities Management

- Responsible for general maintenance of all buildings on the premises.
- Gained valuable industry knowledge by engaging with electrical engineers on-site.

Appleby College (Summer 2024)

Oakville, Canada

Advanced Video Game Design Camp Instructor

- Taught 10–14-year-olds how to use a game engine framework (GMS2) to create their own games.
- Ensured the enjoyment and safety of all campers
- Facilitated fun outdoor games during breaks.

Familiar Software Tools

Languages:

Java, C#, C/C++, Python, Verilog, HTML / CSS, JavaScript, PHP, Bash (Linux terminal), SQL, Assembly for x86-64/MIPS/65C02 systems

Frameworks/Libraries:

Unreal Engine 5, Unity, GameMaker Studio 2, OpenGL, GLUT

Programs and OSes:

Git, Jira, Trello, Perforce, Apache HTTP, Blender, JetBrains IDE Suite, Quartus Prime II, Linux (Ubuntu, PopOS, RPi OS), and more

Projects / Tech. Interests

(see more projects on my website: jacobswockyworld.ca)

Custom PCB for VGA graphics card ([link](#))

- Initially prototyped the working circuit on a breadboard to produce a VGA video signal with just discrete TTL chips.
- Designed a proper PCB of the circuit in KiCAD EDA software to then be sent to a manufacturing company.
- Interfaceable with a self-made 6502 computer for graphical programs.
- Ported the schematics to Verilog HDL in Quartus to use on an Intel MAX10 dev board.

Microcontroller/Electronics familiarity

- Building digital circuits since the age of 13.
- Wiring microcontroller projects since age 14.
- Experience in soldering since age 15.
- 2 yrs. experience with ESP32-WROOM board.

Transferable Skills

- **Initiative:** Deep passion to learn in many fields, including Electrical/Mechanical Engineering, Physics, Chemistry, Neuroscience, etc.
- **Fast Learner:** Able to quickly acquire new technical skills by practicing outside of work.