AVA JAKOB

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EDUCATION

University of Toronto, *Electrical and Computer Engineering*   *(September 2021-June 2025)*
- Expected Graduation in 2025 with Business and AI Minors, specialization in Computer Hardware and Software
- Relevant Coursework: Data Structures and Algorithms, Operating Systems, Calculus I, II & III, Software Engineering, Computer Organization, Applied Fundamentals of Deep Learning, Introduction to Databases, Computer Hardware

EXPERIENCE

Schulich School of Engineering, *Technical Services Intern*   *(May 2023-August 2023)*
- Developed Android navigation application in Unity using C# and Python for SSE's seven story Engineering Complex featuring real-time dynamic user location tracking with a precision of 0.5 meters, updating every 0.2 seconds
- Leveraged Unity's powerful cross-platform capabilities to create a user-friendly and visually engaging navigation tool, providing algorithmically calculated paths and directions in under 2 seconds

Girls Who Code, *Computer Science Teaching Assistant*   (*June 2022-August 2023*)
- Instructed coding fundamentals in HTML, CSS, JavaScript, and p5.js to over 150 underrepresented High School students interested in Computer Science, focusing on interactive and responsive website and game development
- Co-directed operations and logistics between Girls Who Code, corporate sponsors, teaching team, and students
- Collaborated with partner companies including Bank of America, BlackRock, Microsoft, Discover, and DTCC

PROJECTS

Interactive Map *(Similar to Google Maps)*, *Mapping Platform in C++*   *(January 2023-April 2023)*
- Built interactive transportation map with route calculation and geographical intelligence in team of 3 students
- Designed platform by integrating a course-proprietary API, using Glade, GTK, and EZGL libraries to develop a graphical user interface prioritizing user experience
- Focused on database management and the implementation of A*, Dijkstra, 2 opt, and Heap Algorithms to enable smart pathfinding, returning the same initial path as Google Maps over 98.3% of the time in less than 0.1 seconds

Extended Processor, *Assembly Processor in Verilog*   *(March 2023-April 2023)*
- Designed and implemented a Processor in Verilog capable of performing digital logic, data transfer, and conditional assembly commands (including mov, str, or, b{cond}...), implemented 10 more commands than 95% of students
- Synthesized and tested circuit using Intel Quartus Prime and Field Programmable Gate Arrays (FPGAs)

Reversi Game Bot, *Decisive Game Bot in C*   *(March 2022-May 2022)*
- Developed Bot that uses weighted decisions and board analytics to make moves, wins over 98% of games played
- Placed in the top 10% in a class of over 600 engineering students, beat Teaching Team created Game Bot

OUTSIDE ENGAGEMENT

You're Next Career Network, *Operations and Logistics Associate*   *(May 2023-Present)*
- Connected 5000+ students to 70+ companies by organizing University of Toronto's largest Career Fairs
- Curated and directed 10+ professional development events including Technical Resume Reviews, Practice Interview Sessions, and Co-op Internship Panel Discussions with companies such as Spotify, RBC, and Tesla

New York Youth Symphony, *Violinist & Ambassador*   *(September 2018-June 2021)*
- Won Grammy for "Best Orchestral Performance" in 2023 for "Works by Florence Price, Jessie Montgomery, and Valerie Coleman" spotlighting African-American composers (#1 in Classical Music on the Billboard top 100)

Other Extracurriculars: Chair of Electrical and Computer Engineering Student Society, IEEE, Fisher House Council at St. Michael's College, Society of Women Engineers, 100 Women in Finance, Engineering Society, Orientation Week Leadership

SKILLS

Programing Languages: C | C++ | C# | Python | JavaScript | HTML | CSS | Java | SQL | Rust | Scala | PHP | Ruby | Go | R
Cloud Platforms: AWS | Microsoft Azure | Google Cloud Platform | Talend | BigQuery | AWS S3
Core Skills: Project Management | Software Design | Database Management | Application Development | Cloud Computing | Operating Systems | Software Research | Deep Learning
Tools: Unity | SolidWorks | Microsoft Office | Git | Linux | Unix | Verilog | Assembly | MATLAB | Arduino | Android SDK
Languages: English (*Native*), French (*Fluent*), German (*Advanced*)