Jakob Koblinsky

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Education

University of Waterloo, BASc Computer Engineering	Sept 2020 - Apr 2025

Experience

Randox Laboratories — Jan 2024 - Apr 2024
Embedded Software Intern — Antrim, Northern Ireland

– Tirelessly improved reliability of Evidence Evolution—C++, clinical analysis machine
– Pinpointed root cause of long-standing fatal fault on errant Cron job by scrutinizing meager logs
– Eagerly scripted tools in Python for alleviating developer friction, e.g., site-wide config grabber
– Prevented machine from ripping itself apart by revitalizing forgotten sensors
– Made minor improvements to Qt GUI wherever most vital, e.g., data filtering, tighter access control
– Immersed myself in a new culture and greatly expanded my view of life

Arup — Jan 2023 - Apr 2023
Software Intern — Toronto, Ontario, Canada

– Developed new features for MassMotion—C++, desktop application for 3D pedestrian simulation
– Researched and presented ways to write expressive code with new C++20 features
– Built indent reformat feature for Python script editor to improve user experience
– Added live syntax error feedback to script editor using Tree-sitter to reduce the edit-compile-test loop
– Improved maintainability of script editor by isolating and unit testing main data structure
– Demonstrated strong communication skills with well-received end-of-term presentation

Evertz Microsystems — May 2022 - Aug 2022
Embedded Systems Intern — Burlington, Ontario, Canada

– Validated and improved MIO-BLADE-Z21—Embedded, Linux, C++, Audio/Video Processing Device
– Prototyped library with C++ templating and subject-observer pattern to simplify inter-process callbacks
– Researched and reported on latest IEEE video payload specs; confirmed compliance

Genellipse — Sept 2021 - Dec 2021
Software Intern — Mississauga, Ontario, Canada

– Transformed expensive data pipeline into cheap live data dashboard with Python and AWS
– Integrated GitLab-to-AWS CI/CD pipeline for consistent deployment

Demand Power Group Inc — Jan 2021 - Apr 2021
Data Analysis Intern — Toronto, Ontario, Canada

– Implemented genetic algorithm in Python for battery use optimization; provided revenue stream insight
– Analyzed client energy data using Python Pandas and presented findings to COO

Personal

– Finished Advent of Code 2024, 2023, and most of 2022 all in Python and C
– Really enjoy math—currently taking non-degree course in Real Analysis