Xander **Naumenko**

QUANTITATIVE TRADER · SOFTWARE ENGINEER

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Education

University of British Columbia   *Vancouver, BC*
BASC IN ENGINEERING PHYSICS, MINOR IN HONORS MATH   *September 2019 - May 2024*
- Cumulative average of 92% (4.33/4.33 GPA equivalent)

Experience

Jane Street   *New York City, NY*
QUANTITATIVE TRADING INTERN   *May 2023 - August 2023*
- Used statistics and machine learning techniques to model financial market behavior

Tesla   *Palo Alto, CA*
SOFTWARE DEVELOPMENT INTERN   *May 2022 - December 2022*
- Contributed to the Linux Kernel and baremetal firmware for various cores of Tesla's Autopilot self driving platform
- Brought up low level silicon verification and unit test framework for the Autopilot board
- Led development of software for custom PCB enabling system level regression tests of vehicles, using C, Make and gdb

UBC Rocket   *Vancouver, BC*
SOFTWARE & ELECTRONICS TEAM LEAD   *September 2019 - May 2022*
- Directed a team of 5 developers to design software, firmware and electronics for rocket going to 100km high
- Wrote large scale firmware codebase completely from scratch in C, using FreeRTOS, MCUXpresso and CMake
- Developed ground station software responsible for communicated with onboard electronics over radio, written in Python using PyQt

TRIUMF Particle Accelerator   *Vancouver, BC*
DATA SCIENCE INTERN   *January 2021 - May 2021, July 2019 - August 2019*
- Conducted precision magnetic field maps of important components to reduce experimental uncertainty of a multi-year experiment
- Lowered magnetization uncertainty of components by 70% by implemented python models to fit experimental data

Spot Solutions   *Vancouver, BC*
SOFTWARE DEVELOPMENT INTERN   *May 2020 - August 2020*
- Led the implementation of the Bella Project app on iOS in Swift with Unity plugin integration
- Designed a custom PCB and enclosure to record and report data back to above app, reducing space taken by apparatus by 60%
- Decreased internal process times by 10 hours per month by writing a .NET Core web app in C# to automate repetitive admin tasks

Technical Projects

Computerraria - A 32 Bit CPU Inside Terraria
RUST, C#, PYTHON   *November 2022 - Present*
- Used in-game wiring to construct a fully compliant RISC-V CPU inside Terraria (an adventure video game), video summary here
- Wrote mod to reimplement the circuitry system 50,000% faster than the base game using algorithmic and low level optimizations
- Created high level rust driver API to implement programs like Pong, the game of life and even a 3D renderer on the CPU

Foosbar - The World's best Foosball Robot
C++, ROBOTICS, COMPUTER VISION   *September 2022*
- Designed and assembled a fully autonomous open source robot to play one side of a foosball table, video summary here

Noteation - Music made Intuitive
TYPESCRIPT, REACT, PYTHON, FLASK, COCKROACHDB   *September 2022*
- Hack the North finalist (top 12 out of 200+ teams) project that reads+annotates sheet music while flipping pages using gaze tracking
- Uses AdHawk eye tracking to stream events to CockroachDB backend in Python, and React frontend polls for new events to flip pages

PCB Business Card
ALTIUM, REFLOW SOLDERING, BLUETOOTH, NFC   *November 2020 - January 2021*
- A custom PCB that both acts as a business card and a fully programmable microcontroller, pictures/schematics on on Github
- When all chips are placed it has LEDs, bluetooth communication, UART+SPI outputs as well as much more functionality