Port Coquitlam, B.C. **778-885-6361**

github.com/arturdanilenko

Artur Danilenko

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Education

Vancouver, BC **University of British Columbia** **Expected Graduation: Apr 2022**

- **Major:** BASc specializing in Electrical Engineering
- **Relevant Courses:** Data Structures & Algorithms, Operating Systems, IoT, Embedded Systems

Software Projects

Personal Website: arturdanilenko.github.io

Control System for a Piano Playing Robot:

- Designed PID controller by developing an algorithm that drives robot's arms according to the encoder feedback
- Established communication between ATmega and Atheros processors using OpenWrt Linux distribution
- Formed a connection from Arduino Yún to a local server and expanded memory to incorporate a database
- Developed a control panel web interface using HTML, JavaScript and REST API to enable remote access
- Added authorization step using PHP and SQLite to secure the panel once it is discoverable by external networks
- Utilized: HTML/CSS, JavaScript, PHP, SQLite3, C++, OpenWrt, Processing, Arduino Yún

Coin Picking Robot

- Developed software to analyze inductor states to allow the LTC2308 to locate randomly placed coins
- Reduced the average locating time by 16% through designing an algorithm with larger area/time coverage
- Optimized coin detector's interrupt service routine allowing it to recognize small targets like edges of a dime
- Utilized: C, Circuit Design, Oscilloscope, LTC2308 microcontroller

Reflow Oven Controller

- Worked collaboratively to build a reflow oven controller using DE1-SoC to allow small-scale PCB soldering
- Modelled a state machine that regulated oven's environment given inside temperature and elapsed time
- Plotted data from the state machine using Python and bluetooth to verify controller's consistency and accuracy
- Utilized: 8051 Assembly, VHDL, Python, bluetooth module, DE1-SoC FPGA

Line Following Robot

- Formed a line-following robot by integrating a PIC32MX795 chip, photodetectors and stepper motors
- Enhanced line recognition by analysing the reflection difference between the line's material and the background
- Reduced track completion time by 20% through improved filtering of received data to smoothen robot trajectory
- Utilized: C, PIC32 Microcontroller, Photosensors

Employment

Fulfillment Department Manager at Walmart Inc **Jan 2018 - Nov 2018**

- Improved team's efficiency by careful planning, hosting focused meetings and assigning detailed tasks
- Completed office tasks such as merchandise tracking, staff scheduling and reporting daily progress

Volunteering

VP Finance at UBC ECE student society **Apr 2019 - Present**

- Managed society's finances through accurate accounting, tracking and reimbursing
- Communicated with executives and student body to plan and organize various professional and social events

Skills

- **Confident:** C/C++, Java **Proficient:** JS, PHP, Git, Assembly **Familiar:** HTML/CSS, C#, SQLite, Python