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 & Atheros processors and SD Card using OpenWrt Linux distribution forming a connection from Arduino Yún to a local server and expanding memory to incorporate a database
- Extended the control panel onto the web interface using HTML, JavaScript and REST API which enabled the user to remotely manipulate and observe the data handled by the system's main processor
- Added authorization using PHP and SQLite to secure the panel once it is discovorable by the external networks
- Utilized: HTML/CSS, JavaScript, PHP, SQLite3, C++, OpenWrt, Processing, Arduino Yún

Coin Picking Robot

- Developed software to analyze inductor states allowing the LTC2308 to locate randomly placed coins
- Reduced the average time for locating coins by 16% through designing a more sophisticated motion algorithm
- Optimized coin detector's interrupt service routine allowing it to recognize small targets like edges of a dime
- Utilized: C, Hashtables, 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
- Programmed 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 concistency and accuracy
- Utilized: 8051 Assembly, VHDL, Python, Bluetooh Module, DE1-SoC FPGA

Line Following Robot

- Formed a line-following robot by integrating a PIC32MX795 chip, photodetectors and a cart
- Enhanced line recognition by analysing the reflection difference between the line's material and the background
- Reduced track completion time by 20% through designing code which filters received data and smoothens motion
- Utilized: C, PIC32 Microcontroller, Photosensors

Employment

Fulfillment Department Manager at Walmart Inc

- 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

- 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