YASH SARDHARA

Computer Engineering Student

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EXPERIENCE

Undergraduate Teaching Assistant

UBC Department of Computer Science

September 2019 – Ongoing | The University of British Columbia

- Assisted students in course work during lectures for the introduction to computation in engineering course
- Monitored students during programming Labs and Examinations
- Evaluated student examinations

PROJECTS

ARC4 Cipher

UBC Digital System Design

October 2019 | The University of British Columbia

- Designed a digital circuit using system verilog to crack two ARC4 encrypted messages in parallel
- Incorporated on-chip memories with ready-enable interface for an efficient digital circuit design
- Tested the circuit by simulation on ModelSim - Altera and by synthesis for De1-SoC using Intel Quartus Prime

Simple RISC Machine

UBC Introduction to Microcomputers

October 2018 – November 2018 | The University of British Columbia

- Designed a simple reduced instruction set computer using verilog with ALU operations, RAM, eight 16-bit register file and five stage pipeline datapath
- Implemented ALU, memory and branching operations that can support virtual function calls
- Tested the circuit by simulation on ModelSim - Altera and by synthesis for De1-SoC using Intel Quartus
- Collaborated with a partner to design the RISC machine

EXTRACURRICULAR ACTIVITIES

Institute of Electrical and Electronics Engineers

UBC IEEE Student Branch

September 2018 – Ongoing | The University of British Columbia

- Represented UBC IEEE in organization of UBC Tech Career Fair 2019 & 2020
- Organized and participated in IEEEXtreme 2019 and 2020, a global 24 hour programming competition
- Organized and participated in Rogers-MobiledgeX hackathon; Explored applications for new technologies such as 5G internet network and edge computing

SailBot Design Team

UBC SailBot

February 2019 – June 2019 | The University of British Columbia

- Developed a C++ program to incorporate bathymetry data as heuristic for global path finding algorithm of the autonomous sailboat

EDUCATION

B.A.Sc | Computer Engineering

The University of British Columbia

September 2017 – May 2022

- Co-op: Available for 4-16 months starting May 2020

SKILLS

Assembly / Hardware Description Languages

x86 | y86 | Arm | System Verilog

Tools

Microsoft Office | GitHub | GitBash | ModelSim - Altera | Altera Monitor Program | Intel Quartus

General

Git | Debugging | LaTeX | Microsoft AZURE | Raspberry Pi | Arduino | De1SoC | Metromini | Circuit Design & Analysis | Microsoft Windows | Unix/Linux (Learning)

COURSEWORK

Computation

- Software Engineering
- Operating Systems
- Digital Systems Design
- Data Structures & Algorithms
- Artificial Intelligence
- Micro-controllers

Mathematics

- Multivariate Calculus
- Differential Equations
- Mathematical Proof
- Statistics
- Linear Algebra