

AndrewPai

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Technical Skills

- **Java** (2 Years)
- **Android Studio** (3 Month)
- **C++** (4 Months)
- **Python** (3 Months)
- **Arduino** (1 Year)
- **Circuits** (2 Years)
- **PowerShell** (2 Months)
- **Visual Basic** (1 Year)
- **VHDL** (3 Month)
- Applied OOP knowledge in Android Studio to develop a 2048 android game which utilized the phone sensors
- Experience using @Test in Java to run test cases
- Scripted with Python and PowerShell to automate tasks during coop
- Used Quartus Prime to develop FPGA designs and perform timing analysis

Hackathons

Carleton University Hackathon
Ottawa, Ontario - Mar 17

- Utilized/Learnt Bootstrap, HTML, and CSS to visualize a home network
- The home network displayed info about any connected devices to the network and warning notifications if there was a problem with the devices
- Led team of 4 to design a website and distribute tasks
- **Runner-up winner** for Martello's API challenge

Education

University of Waterloo
Candidate for Bachelor of Applied Science in Electrical Engineering
2016 – Present
Fall 2016 - Top 20%

Experience

Junior Engineer

Communications Research Centre Canada

Ottawa, Ontario

Jan – Apr 17

- Wrote scripts in Python and PowerShell to automatically tag resources in Azure and update asset information for asset management
- Reduced processing time of 900 items from about 2 hours of manual work to 20 minutes automated
- Researched, tested, and presented different programs/hardware to understand how they worked and what their capabilities were
- Managed user accounts and created custom roles in Azure Active Directory

Quality Control

Markham City Hall – IT Department

Markham, Ontario

Sep 14 – Jan 15

- Performed quality control on Markham website by completing test cases to ensure form functionality on various platforms and UI issues
- Systematically organized results onto excel for easy tracking
- Cooperated with coworkers in other departments through phone and email by utilizing strong verbal and written communication skills

Projects

Shape Database

Java

github.com/Andrew-Pai/ShapeInheritance

Nov 15

- Implemented core OOP concepts to create a database of various shapes
- Capable of adding/removing objects from database and retrieving info about each object using an unique ID
- Utilized abstract classes, hierarchical inheritance, polymorphism, and encapsulation for the shapes unique formulas but similar dimensions

Assembly Language Parser

C++

github.com/Andrew-Pai/AssemblyParser

Nov – Dec 16

- Parses each line of assembly code, recognising the diverse types of instructions and parameters with varying number of parameters
- Output errors in syntax, invalid parameters, and which line the error was located, while ignoring comments
- Provides statistics about assembly instructions used

4-Bit Adder

Breadboard Circuits

Apr – May 17

- Used basic electronic components, 2N3904 transistors and resistors to create the logic gates.
- Designed schematic that can add numbers up to $2^4-1(15)$ using AND, OR, and XOR Gates.

Automatic Asset Updater

Python

github.com/Andrew-Pai/IFMS-Updater

Apr 17

- Programmed script that updated asset information in bulk to increase work efficiency by about 6x
- Reads asset number and location from csv file, then compared location to database of users
- Used pywinauto that controlled the mouse and keyboard to navigate through an UI and update assets