

YUYANG (RAIN) ZHAO

2B Honours Computer Science

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SUMMARY OF QUALIFICATIONS

- Object oriented programming in TypeScript/C++/C#/Java/Python
- Functional programming in JavaScript/Scheme (Racket)
- Web development in PHP/React/JavaScript/HTML/CSS
- Automated unit, functional (API), end-to-end testing
- Collaboration, communication and leadership in timeboxed projects (Agile/Game Jam/Hack-a-thons)
- Study of algorithms, operations on heaps, tree structures, dictionaries, hashing
- Study of MIPS/ARM processor architecture, assemblers and C compiler in C++
- Bash scripting in Linux, Git, GCC/G++ make, GDB

WORK EXPERIENCE

Loopio Inc, Toronto ON

May-August 2020

Software Developer in Test

- Joined fast paced agile team in development work and automated testing of SAAS B2B platform
- Involved in building homepage UI with asynchronous logic, PHP controllers, SQL, and React front-end
- Writing PHP/React unit tests, Codeception PHP functional tests, Web Driver (Selenium) and Puppeteer automated browser tests
- Implementing REST APIs that are authenticated, scoped and interface with customer data according to OpenAPI specification
- Planning of happy path testing, negative testing, and destructive testing of API endpoints

Maplesoft, Waterloo ON

May-August 2019

Automated QA Tester

- Designed and presented an automated testing framework to abstract and automate the running of web component tests and screenshot testing
- Data driven tests utilized TypeScript, Jest and Puppeteer API
- Automated generation of base and comparison screenshots, management of temporary files and image resizing corrections
- Wrote Node.js scripts to handle command line flow and file management
- Worked under guide of a senior engineer and research/communication within the open source community

PROJECTS

Object Oriented Design project of Watan game

December 2019

- Group project managed on GitLab and based on the board game Catan
- Study and usage of interfaces, classes, inheritance, composition, and design patterns
- Drafted the UML diagram to utilize Template Method, Observer and MVC patterns
- Incorporated encapsulation and composition to build the game objects and game logic
- Abstract classes and template classes were used to achieve polymorphism and multiple observer inheritance

- Design followed practice of separation of concerns, reduced coupling, increased cohesion
- Finished on time with a grade of 97%

Design and Graphics of Pacman game project

February-June 2018

- Peer collaboration on GitHub to design Pacman in Eclipse's WindowBuilder framework
- Drafted the game objects and their relationships, implemented the graphics and rendering
- Game logic update functions, draw methods, Java Graphics, MVC pattern
- Extra implementation of board customization with saving and loading
- Finished ahead of time and achieved a grade of 97% for school project.

Developer of Windows application AutoDrawer

2016

- Wrapped a desktop application around an algorithm that emulates shading and sketching with cursor movements
- Used Visual C# in Visual Studio's application framework to build the config window and preview window GUIs
- Handles image uploads and image processing for translation into cursor movements

Developer of Unity3D game AC-130

2016

- Developed a 3D gunship simulator within the Unity3D game engine
- Made use of prefabs, physics and performance optimizations
- Created GUI with menus
- Used open source assets and preset shaders

EDUCATION

University of Waterloo, Waterloo ON
Candidate for Bachelor of Computer Science

September 2018 - Present

ACADEMIC ACHIEVEMENTS

University of Waterloo President's Scholarship of Distinction (95%+ admission average)
Jarvis CI Centennial Award (Highest average) grade 9 and 11
CEMC CCC Junior Certificate of Distinction (top 25%)