Nicholas Vallejos

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EDUCATION

Binghamton University, State University of New York **May 2020**
Bachelor of Science in Computer Science
GPA: 3.40/4.00

CAPABILITIES

Programming Languages: Java 8, C#, C++/C, JavaScript, Python, HTML/CSS
Mobile Development & Game Development: Java & Android Studio, C# & Unity3D Game Engine, C++ & Unreal Engine 4
Frontend Web Development Using: HTML, CSS, JavaScript, ReactJS
Software and OS: git, bash, Linux, Windows 10, Visual Studio 2019, Eclipse IDE
Additional: SQL, NodeJS, Microsoft SQL Server 2014, TCP/IP familiarity, UDP familiarity, Apache Ant

PROFESSIONAL EXPERIENCE

IT Intern, Westchester County Government | White Plains, NY **June-August 2018**
- Organized server logs in Excel documents to facilitate server maintenance
- Gained a basic understanding of Microsoft SQL Server 2014 under the guidance of another software engineer
- Extended their Java codebase through implementing new JavaBeans which are serializable classes that contain getter and setter methods
- Wrote HTML and JSP code to create a webpage that displays users who accessed and read files from the county's servers
- Utilized SVN plugin in Eclipse IDE for source control

PROJECT EXPERIENCE

Amazon Clone, ReactJS & CSS | Mamaroneck, NY **December 2020**
- Programmed an Amazon website clone utilizing React function components and vanilla CSS for styling
- Deployed application on Firebase and used Firebase for login authentication
- Used React context to broadcast product data to multiple components
- Utilized git for source control and pushed to public Github repository

Unity2D Android Mobile Game, C# Programmer | Mamaroneck, NY **May-June 2020**
- Developed a mobile game using the Unity2D game engine where the objective of the game is to jump over an endless wave of obstacles to accumulate as many points as possible
- Programmed a collision detection system that casts invisible rays to determine the distance between the player and collidable objects
- Implemented an object spawning system that relies on a timer mechanism where the value of the timer changes to a random value after each object is spawned
- Utilized git for source control and Trello for project management
- Published the game to multiple outlets including indie game website itch.io and the Google Play Store and provided support to users who have downloaded from multiple countries

Map Container, C++ Programmer | Binghamton, NY **April 2019**
- Recreated the Map data structure from the Standard Template Library from scratch in 700 lines of code following the template metaprogramming technique
- Debugged using Valgrind to track and resolve memory leaks
- Programmed an internal skip-list data structure to store Map data elements which allowed for O(log(n)) insertion time and search time
- Implemented three sub-classes including Iterator, ReverseIterator, and ConstIterator which are wrappers around a pointer to an element inside the Map and provide safe traversal around the data
- Pushed source code to Github repository

Random Music Generator, Android App, Java Co-Programmer | Binghamton, NY **February 2019**
- Designed and implemented an android application that generates short music tracks with randomly generated notes using a custom music generation algorithm for a 1-day hackathon event
- Created a simple UI through Android Studio that allows the user to easily customize the music generation algorithm
- Utilized Trello to visualize the projects goals and split up work amongst a 3-person team of programmers
- Employed git for source control
- Published app to the Google Play Store