Andrew Ketcham, CPA
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EDUCATION

University at Buffalo, The State University of New York

Bachelor of Science in Computer Engineering	**Expected December 2018**
GPA: 3.98/4.0	
Bachelor of Science in Accounting	May 2014
GPA: 3.98/4.0	
Master of Science in Accounting	May 2015
GPA: 4.0/4.0	

ENGINEERING PROJECT EXPERIENCE

University at Buffalo Nanosatellite Laboratory
GLADOS Flight Software (C++), Current
Objective: To design and implement programs to successfully send a nanosatellite to space, using C++, Git, and CLion IDE

- Designed function to receive and queue image command requests to the satellite through use of vectors, mutexes, and multithreading (POSIX threads)
- Identified performance improvement through use of C++ priority queue in storing commands to satellite by time to execute
- Designed function to convert incoming values for current to appropriate units to be used in the rest of the satellite
- Gain understanding of shared code base through use of Github, including pushing, pulling, and committing project changes through use of branches
- Improve project management skills through use of shared documents which include subsystem updates and outstanding items

University at Buffalo
Clue Game (Java), Fall 2016
Objective: To design and implement a program that imitates the board game "Clue" in Java using Eclipse IDE

- Implemented a board consisting of the various components of the game (players, hallways, doorways, rooms, etc.) using knowledge of Java abstract data types and class-subclass structure
- Designed a recursive method using a modified depth-first search algorithm to calculate and return to the player a list of possible moves and pathways given a specific dice roll
- Developed pair programming skills while working with other team members

Personal Project
Personal Website (HTML/CSS), Current
Objective: To design and implement a website outlining my personal and professional career using HTML and CSS

- Developed fully functional website from scratch, writing each line of HTML or CSS, without use of website builder (e.g. Squarespace)
- Learned how to host a website through Github, including how to write HTML and CSS to link to other files in the website repository
- Developed a mobile-friendly website that automatically changes layout as screen size varies using the Bootstrap HTML, CSS, and JavaScript framework
- Gained understanding of good UI and design elements, skills transferable to application GUI development

Personal Project
8 Bit Computer (Hardware Project), Current
Objective: To create a programmable 8-bit computer using basic electronic components and a unique machine language

- Implementing programmable 8-bit computer including clock, registers, arithmetic and logic unit, RAM, program counter, output, and busses
- Developing knowledge of electronics, including implementation of transistors, resistors, and capacitors in the creation of logical gates and computer parts.
- Developing own machine language in order to set input bits and run programs.

WORK EXPERIENCE

M&T Bank, Buffalo, NY
Technology Intern, Deposit Operations, June 2017 – August 2017
- Identified area for process improvement by linking JCL symbolics between control cards, allowing for updates to production jobs to require less migration
- Created multiple reports that identified accounts having an issue with statement delivery, and used complex logic and arrays to distribute accounts to various outputs
- Gained experience with real-world test, certification, and production migration processes, including testing changes and documenting results

University at Bufalo, Buffalo, NY
Tutor/Teaching Assistant, January 2017 – June 2017
- Held weekly review sessions to review material for roughly 25 students each week
- Personally developed review questions and problems for students on a weekly basis
- Graded quizzes and exams for roughly 100 students, including grade statistics and analysis for class professor
- Held personalized tutoring sessions for students as needed, resulting in a marked improvement in class quiz and exam grades

Pricewaterhouse Coopers, LLP, Buffalo, NY
Risk Assurance Intern, June 2014 – August 2014
Risk Assurance Associate, July 2015 – June 2016
- Identified and corrected gaps in walkthrough documentation that had previously led to deficient testing
- Led review of banking client's compliance with Regulation DD, including performing walkthroughs, obtaining evidence of compliance, leading a team of 8 testers, and communicating exceptions to client management
- Delegated testing responsibilities to new team members and reviewed work for adherence to quality measures
- Tested and documented tests of clients' Information Technology General Controls (ITGCs) in the areas of access to programs and data, program change, program development, and computer operations
- Built strong relationships with client management when performing walkthroughs

TECHNICAL SKILLS

Proficient With
- C++
- Java
- Easytrieve
- JCL
- Windows OS
- Linux / Ubuntu
- Eclipse
- Clion
- Version Control (GIT)

Experience With
- COBOL
- HTML
- CSS
- JavaScript
- Atom

Currently Learning
- Python
- C
- Assembly

ACTIVITIES AND HONORS

UB Nanosatellite Laboratory, February 2017 – Present
Dean's List, May 2010 – Present
Buffalo United Martial Arts, Jiu Jitsu, Judo, and Muay Thai, June 2015 – Present
Victor and Joan Brown Scholarship
Allan and Judy Felong Trinkwald Scholarship
NYSSCPA Outstanding Graduate Student Award

LICENSURE

Certified Public Accountant