Aidan Uy

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EDUCATION

Binghamton University, State University of New York, Watson School of Engineering **Expected May 2020**
Bachelor of Science in Computer Science
Major GPA: 3.60/4.00
Watson School Dean's List **Fall 2016 – Present**

TECHNICAL SKILLS

Languages: Java, Python, C++, C, X86 Assembly, MIPS
Software: Git, Eclipse, Logisim, IDLE, Vim, MS Word, MS Excel, MS PowerPoint

PROJECT EXPERIENCE

ANT HILL **February 2018**
- Produced a program that utilized a turn-based system to simulate an ant hill in C++
- Maintained the living ants in a linked list and established a grid in which the ants could move, fight, or find food
- Incorporated chances of the ant hill being attacked and forcing all ants within a radius to defend
- Tracked the actions of each ant, the number of times the ant hill was attacked, and the number of successful defenses

VIRTUAL MEMORY SIMULATOR **December 2017**
- Developed a program that simulated converting virtual addresses and looking up page tables in C
- Organized a system to search for virtual addresses in the TLB and in page tables
- Invoked the page fault handlers to simulate OS physical frame allocation, calculated the time needed to access an entry, and replaced unused entries in the TLB and page tables

HELLO SHELL **December 2017**
- Devised a command line interpreter in C
- Handled bash commands and parameters through arrays and utilized execvp to execute them

BOMB DEFUSAL **November 2017**
- Defused a binary bomb by using a debugger to reverse engineer each phase
- Utilized GDB, objdump, and disas to break down the bomb executable into assembly language
- Traced through low-level assembly code to solve each phase

COURSE SCHEDULER **November 2017**
- Constructed a parser that read binary and text files containing data about students and their classes in C
- Stored the data in a linked list, sorted students and classes by name and number with bubble sort, and generated files containing the formatted data

POKER **October 2017**
- Built a program that simulated two people playing poker in C
- Derived cards from a text document and assigned each player's hand a value in a bit vector based on strength
- Constructed the program to read text files where each line is a different round and determine a winner

PIPPIN SIMULATOR **May 2017**
- Created a simulator of a simple computer with a complete graphical user interface in Java
- Implemented an instruction map, assembler, loader, and an exception handler to load and parse PASM files
- Allowed stepping through instructions, running PASM files at different speeds, and detecting syntax errors

ARCADE CITY **December 2016**
- Designed point system that revolved around winning and losing rock, paper, scissors in Python using Pygame
- Generated a text file for storing points and high scores
- Implemented purchasing of other games, such as a higher or lower guessing game, using point system

LEADERSHIP EXPERIENCE

National Director, Filipino Intercollegiate Networking Dialogue **May 2017 – Present**
- Set standards and create networks between Filipino clubs in upstate New York and along the east coast

Educational Chair Intern, Philippine American League **February 2017 – Present**
- Work with the executive board of the Philippine American League and other cultural organizations to raise awareness about important issues and impart knowledge of Filipino culture