Jim Palomo

COMPUTER ENGINEERING MAJOR · THE UNIVERSITY OF ILLINOIS AT CHICAGO

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Education

University of Illinois at Chicago (UIC) *Chicago IL*

BACHELOR OF SCIENCE IN COMPUTER ENGINEERING *Expected Graduation: May 2022*

- Cumulative GPA: 3.78
- Undergraduate Coursework: Data Structures; Introduction to Embedded Systems; Introduction to Logic Design, Mathematical Foundations of Computing, (Current) Circuit Analysis, Discrete and Continuous Signals and Systems, Probability and Random Processes for Engineers, Computer Organization, Digital Systems Design.
- Filipinos in Alliance Allstate Hot Chocolate Run 5k/15k; (Self) 34th Annual Hunger Walk

Internships

Research Internship for Electrical & Computer Engineering *Chicago, IL*

INTERN, CO-OP AIDE *Jun. 2019 - Aug. 2019*

- Worked on an open-source simulation platform for computer system architecture called gem5
- Established connections among different CPU chip-sets such as ARM & x86 with memory controllers, caches, and interconnects
- Cooperated with an engineering professor and a Ph.D. student on programming tasks and assignment deadlines
- Gained knowledge on Object-Oriented Programming for Python and C++

Projects

Back-End Navigation *UIC*

C++ · XML · VALGRIND (MEMORY LEAKS) · LINUX · GNU MAKE *Apr - May 2020*

- Designed an application that allows the user to observe the back-end functions of loading a map, building a graph, and finding the shortest path between two separate locations
- Integrated Dijstrakia's algorithm to find the shortest path among two points
- Implemented open-source maps from openstreetmap.org of UIC's East Campus
- Debugged using CLion & VSCode, (data structures) Map, Graph, Stack, Vector, Set, Queue

DIVVY Data Hashing *UIC*

C++ · CSV · VALGRIND (MEMORY LEAKS) · GNU MAKE *Apr 2020*

- Developed an application that hashes station and trip data from DIVVY bike-sharing company
- Created a hashmap with separate hash functions for over 1500 trips and 580 bike IDs
- Added multiple commands: search by station id, abbreviation, trip id, bike id, nearby stations, and similar trips
- Debugged using CLion & VSCode, (data structures) Vector, Hashmap

Threaded AVL Tree *UIC*

C++ · CATCH FRAMEWORK (UNIT TESTING) · VALGRIND (MEMORY LEAKS) · LINUX *Mar. 2020*

- Created a general-purpose threaded AVL tree class that dynamically grows that contains insert, copy/construct, print tree, height, rotations, and search keys among a specified range
- Designed with the notation of each node contains a key, value, left/right pointers, boolean for threading, and height
- Debugged using CLion & VSCode, Valgrind (memory leaks), (data Structures) AVL tree, vector, stack

Amazon Autonomous Bot *Self*

PYTHON · GOOGLE APIS · GOOGLE SHEETS *Jul 2019*

- Programmed a web scraping bot that gathers product information on Amazon: price, URL, name
- Updated spreadsheet with data from initial scrape which sends an email notification to the user

Raspberry Pi Smart Monitor *Self*

LINUX · JSON · PYTHON *May 2019*

- Developed through Raspbian OS using open-source code via GitHub (MichMich)
- Implemented personal calendar, cryptocurrency stock tracker, weather API, date & time, etc

Skills

Languages C · C++ · Python · ARM Assembly

Software/Tools Linux · Git · Shell Scripting · SSH · Catch Framework · Valgrind