

Pop Sornsak Thiravechyan

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EDUCATION

Purdue University | West Lafayette, IN

Expected Graduation: December 2018

B.S. in Computer Science

Relevant Coursework: Systems Programming, Computer Architecture, Programming in C, Data Structure and Algorithms, Problem Solving & Object Oriented Programming, Foundation of Computer Science, Virtual Reality Applications

Ruamrudee International School | Minburi, Thailand

June 2014

SAT II: Physics 800, Math 770

Cumulative GPA: 3.22/4.00

Excellence Award in Computer Science, Varsity Swim Team

PROJECTS

Music Visualizer | Unreal Engine 4

May 2016

- VR enabled real time music visualizer with the use of particle system.
- Switchable between visualize the amplitude or spectrum of the music.
- <https://www.youtube.com/watch?v=jTdOXGTMoa8>

xkcd Scraper | Bash

October 2016

- Wrote a Bash script for downloading a range of pages from the xkcd webcomic by scraping the image portions of each page.

Memory Allocation Project | C

September 2016

- Implemented a memory allocator allowing users to malloc() and free() memory as needed.
- Used double-ended linked lists to point to free memory spaces for fast access.
- Allocated memory through pointer manipulation within memory chunks requested from the OS via sbrk().

Word Dungeon | Ruby

August 2016

- Created a text adventure dungeon where users can spawn players, explore the dungeon, and add rooms and descriptions.

Airline Project | C++

April 2016

- Implemented Dijkstra's algorithm to find the cheapest round trip tickets between any two airports.
- Employed Kruskal's algorithm on the Traveling Salesman's Problem to find the cheapest combination of tickets to every airport.
- Analyzed the runtime complexity to be $O(m \log(n))$, with m as the number of possible flights and n as the number of airports.

Dictionary Project | C++

March 2016

- Merge Sorted words alphabetically from a file too big to be held in memory then K-Way Merged them back into one sorted list.
- Employed Binary Search to locate words by using a file pointer to traverse a large, alphabetically sorted file.

Hashing and Heaps Project | C++

February 2016

- Cuckoo Hashed numbers using two arrays, rehashing the numbers into an array of double the size when encountering loops.
- Implemented Min/Max Binary Heap to sort key-value number pairs by the key.

Non-Linear Word Search Puzzle | C++

January 2016

- Solved a non-linear word search puzzle by utilizing resizable stacks.
- Pushed location of found alphabet onto the stack, popped off when the next alphabet was not found in vicinity, resumed search.

SERVICE

Purdue EPICS Service Learning Design Program

May 2016

- Modified a curriculum for teaching middle school students distance estimation through experimentation with mousetrap cars.
- Enforced academic integrity and intellectual engagement by assigning a randomized target distance to each student.
- Improved the sturdiness of the mousetrap car by changing the axle shape from circular to square and elongating the car body.

SKILLS & INTERESTS

Programming & Technologies: C/C++, Java, HTML, JavaScript, Unreal Engine 4, SAS

Languages: English (fluent), Thai (native)

Interests: Longboarding, Fantasy Literature, Scuba Diving (Certified), Emergency Responder (Trained)