# Pop Sornsak Thiravechyan

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## EDUCATION

**Purdue University** | *West Lafayette, IN* *Expected Graduation: May 2018*

*B.S. in Computer Science*

*Relevant Coursework*: Operating Systems, Information Systems, Software Testing, Introduction to Cryptography, Introduction to the Analysis of Algorithms, Virtual Reality Applications, Systems Programming, Computer Architecture, Programming in C, Data Structure and Algorithms, Problem Solving & Object Oriented Programming, Foundation of Computer Science

**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

**Endless Maze** | *HTML, CSS, JavaScript* *August 2017*

- Procedurally generate a playable maze using Eller's algorithm that expands in a Fibonacci sequence after each level.
- Wrote a solver using the Wall Follower algorithm and visualizes it in real-time.

**Music Visualizer** | *Unreal Engine 4* *May 2017*

- VR enabled real time music visualizer with the use of particle system.
- Switchable between visualize the amplitude or spectrum of the music.

**2.5D VR Obstacle Course** | *Unreal Engine 4* *February 2017*

- Built a VR compatible 2.5D platformer obstacle course using Blueprints.
- Viewpoint follows the character smoothly with the use of spring arm to dampen sudden position changes and reduce nausea.
- Used collision block to trigger character respawn and increment death counter.

**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.
- 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.

**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.

## SERVICE

**Purdue EPICS Service Learning Design Program** *May 2016*

- Modified a curriculum for teaching middle school students distance estimation through experimentation with mousetrap cars.
- 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, CSS, JavaScript, Unreal Engine 4, SQL
**Languages:** English (fluent), Thai (native)
**Interests:** Longboarding, Fantasy Web Novels, Scuba Diving (Certified), Emergency Responder (Trained)