

# Zachary Light

## Education:

**Bachelor of Science in Computer Science and Engineering** (Anticipated May 2019)

3.03 GPA at University of California, Merced: Merced, CA

## Relevant Coursework:

Algorithm Design and Analysis, Data Structures, Software Engineering, Object Oriented Programming, Operating Systems, Computer Networks, Image Processing, Robotics, Artificial Intelligence

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**Tech Skills:** C/C++  Python  Git   
Java  ROS  nesC 

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## Related Projects:

### BobcatClassAlerts.com:

*Python backend with HTML5, PHP, and JSON*

A website that sends an alert via email when there is a seat available in a class at UC Merced

- Parses HTML data to read open classes from the school website
- Uses PHP form submission to add classes mid-run
- Uses JSON to store requested classes, easily allowing for the addition of classes or students
- Ensures a sufficient wait time between requests to avoid putting stress on the school's server

### Brick-Breaker:

*C++ with OpenGL*

A rendition of the classic game Breakout, done for my final project in Object Oriented Programming

- Utilizes Object-Oriented concepts I was able to create a dynamic and easily expandable game
- Uses OpenGL to draw graphics
- Used github for group collaboration and version control

### Robotics-Maze/Treasure hunt

*C++ with ROS*

Final Project for my Robotics class

- Utilizes ROS concepts to allow a Husky Robot simulation to traverse a maze
- Uses the camera to find and define hidden objects in said maze
- Used github for collaboration and version control

### Not Another Completely Heuristic Operating System (NACHOS)

*Java, with some C/MIPS*

Operating System simulator project, completed for my Operating Systems class

- Implemented Threads, and all of the functions that come with. E.g. join, halt, etc.
- Implemented paging, a form of memory management
- Implemented a version of TCP, and created a chat room on top of that implementation