

# Amy J. Lewis

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## Education

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California Polytechnic State University – San Luis Obispo, CA

*Expected Grad: June 2019*

Master of Science: Computer Science,

*GPA: 3.4*

Bachelor of Science: Software Engineering, Mathematics Minor

*President's Honor List for 2016-17, Dean's Honor List (five times),*

*Scholar Athlete (Club Water Polo and Water Ski teams),*

*Member of Women in Software and Hardware (WISH)*

## Work/ Volunteer Experience

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International Computer Engineering Experience (ICEX) - San Luis Obispo, CA *March 2017 - Present*  
*Research Assistant*

- Collect sonar and video data using an autonomous underwater vehicle
- Construct 3D visualizations of the wrecks and create a visually pleasing underwater environment with realistic lighting and particle systems
- Use PRM algorithms to create paths for the virtual camera to follow in the virtual world based on cinematographic and geometric principles that appeal to the user
- Travelled to Sliema, Malta in June and collected shipwreck data in the Mediterranean and made a significant find of a WWII Allied torpedo bomber – the “Fairey Swordfish”

BAE Systems, Inc. – San Diego, CA

*June 2016 – Sept. 2016*

*Technical Intern III*

- Summer internship as a software engineering intern working with C++
- Worked mostly with User Interface Development and Preferences, including creating my own enhancements, leading my own project meetings, and debugging older code.

“Engineering Possibilities in College” Camp at Cal Poly – San Luis Obispo, CA *July 2017– Sept. 2017*  
*Lab Assistant*

- Helped high school students in lab to learn about computer security and computer graphics working in Python and Processing.

## Relevant Skills/ Classes Completed

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C / C++

Java

Python

OpenGL/GLEW/GLFW

HTML/CSS

Processing 2+

Data Structures and

Algorithm Analysis

Agile/Scrum

Differential Equations

Linear Algebra

Discrete Structures

Currently learning SQL, Javascript, and working on a year long project with Amazon AWS

## Projects Completed

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### OpenGL/GLEW/GLFW

- Ray Caster
- Astral Offensive: A real-time 3D tower defense
- Mapping 3D shipwrecks in a visually complex underwater environment

### C

- LZW Decompressor
- Calculon – a simplified UNIX command line
- Object Orientated and Operating Systems

### Java

- Designed animations for and programmed a Maze Game
- Developed own “arcade” featuring 5 games

### HTML/CSS

- Currently building GLOWBE: a social media platform where students and researchers can connect abroad and learn about abroad opportunities