

# SETH DUMAGUIN

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## EDUCATION

**\*IN PROGRESS**

Intended Computer Science, Geographical Information System Minor | University of California, Berkeley | May 2020 | 3.10 GPA

- CS61A: Structures & Interpretation of Computer Programs
- CS61B: Data Structures
- Math 54: Linear Algebra and Differential Equations
- CS70: Discrete Mathematics & Probability\*
- Math 53: Multivariable Calculus\*
- Geography 80: Introduction to Geospatial Technologies\*

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## PROJECTS

**Cal-U-Find-It** | *JavaScript, CSS, HTML* | October 2017

- Interactive web application game that is geared towards middle school students wanting to learn about landmarks in California.
- Used leafletjs mapping API and implemented a sampling algorithm to randomize a list of thirty different locations and three different questions for each question to ensure different questions would show in up each level.

**BearMaps** | *Java* | April 2017

- A web mapping application the implemented A\* algorithms. The application lets users pick a starting point and a destination around UC Berkeley and the program finds the shortest path.

**Database** | *Java* | March 2017

- A programming project in which a database management system with a SQL interface.

**Data Structures** | *Java* | January 2017

- Double Ended Array and Double Ended Linked List are created from scratch. Implemented Unit and Integration Tests to see if every aspect of the program was working

**Scheme** | *Python* | November 2016

- Developed an interpreter for a subset of the Scheme language.

**Maps** | *Python* | September 2016

- Programmed a visualization of ratings that uses machine learning, data abstractions, and Yelp dataset to visualize the restaurant ratings around UC Berkeley.

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## EXPERIENCE

**Cal Calling Center, Alumni Telemarketer** | April 2017 – August 2017

- Updated Berkeley alumni about current UC Berkeley affairs and financially outreach for UC Berkeley programs such as the Undergraduate Scholarship, campus safety, and many more.

**Student Tutor, Cathedral High School** | January 2013 – May 2016

- Mentored and tutored three to four struggling students per year before and after school in various STEM subjects such as Algebra I/II, Geometry, Pre-Calculus, Calculus AB/BC, Biology, Chemistry, and Physics.
- Provided student progress reports to parents every week.

**Computer Science (Game Design) Teacher's Assistant, Cathedral High School** | August 2015 – May 2016

- Aided and debugged students' educational games in ActionScript and JavaScript.
- Instructed students in CSS, HTML, ActionScript, and JavaScript to improve their games and personal websites by giving them tips on how to make it user friendly and possibly adding more game elements such as more levels, sounds effects, and animations

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## AWARDS AND ACKNOWLEDGEMENTS

**Globey Game Design and Coding Awards National Finalist Two-Time**

**Trig of the Pearl Harbor** | *JavaScript, HTML, CSS* / August 2015 – December 2015

- A math game set during the attack on Pearl Harbor. The player takes the role of a fighter pilot collecting care packages in a form of Trigonometric Identities.
- Created the game using canvas and the in-game character and collectable were drawn in Adobe Illustrator.

**Test Your Skills** | *ActionScript* | November 2014 – December 2014

- An interactive math game that allows students to hone their skill in Algebra or Calculus. Problems are shown on the screen and the player must solve each problem. Keyboard controls, sound effects, and animations were implemented in Adobe Flash.