

# Austin Tsang

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## EDUCATION

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### University of California, Berkeley

June 2015 - *Expected May 2019*

B.A. Applied Mathematics and Computer Science Minor

Fiat Lux Scholarship Awardee

## RELEVANT COURSEWORK

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### Mathematics

- Multivariable Calculus, Differential Equations, Discrete Mathematics, Probability Theory
- Linear Algebra, Numerical Analysis, Abstract Algebra

### Computer Science

- Data Structures, Machine Structures, Algorithms, User Interface Design and Development

## PROJECTS

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### “EduCarbon” — A Carbon Footprint Tracker for Students (*Python, HTML, JavaScript, CSS*)

- Contributed to a classroom-based web application that focuses on crowdsourcing which allows target users (students between the ages of 8-10) to track and compare their carbon footprint status through visual representations by answering daily questionnaires concerning environmental habits
- Followed a strict project protocol that consists of ideation, observational studies, wireframes, and evaluations
- Presented at a project showcase and poster session to demonstrate the importance of developing environmentally friendly habits at a young age and encouraging early exposure to the issue of climate change

### “BearMaps” — A Raster Program (*Java*)

- Created a program that emulates the rastering method of web-based map applications such as Google Maps
- Developed a method of rastering over 400,000 map images using the QuadTree data structure
- Integrated a procedure that computes the shared longitudes and latitudes of each image in order to display the correct adjacent images based on a user’s desired display location

### “Yelp Maps” — A Visualization of Restaurant Ratings (*Python*)

- Developed a program that utilizes the Yelp dataset to create a visualization of Berkeley restaurant ratings
- Utilized machine learning techniques such as least-squares linear regression to discover data patterns in order to predict new restaurant ratings

## EXPERIENCE

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### UC Berkeley Student Learning Center — Math Tutor

*June 2016 - Aug 2016*

- Tutored over 50 incoming UC Berkeley students in introductory college mathematics courses
- Helped students transition into the theoretical approach of mathematics by assisting in mathematical proofs
- Attended weekly training sessions to develop communication and professional skills

### East Bay Municipal District — Data Analyst Intern

*June 2014 - Aug 2014*

- Discovered statistical trends using computer software (Google Earth and Excel) to develop water saving strategies for local clients that reside in the East Bay Area
- Proposed water budget reports to minimize water usage rates of over 500 local residents
- Created a collage of water usage reports to present at a public exposition to encourage water preservation and to increase awareness of the California drought

## RELEVANT SKILLS

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- Python, Java, MATLAB
- HTML, JavaScript, CSS