

# Emilie Menard Barnard

COMPUTER SCIENCE EDUCATOR

✉ emiliebarnard@gmail.com | 🌐 www.emiliebarnard.com | 📷 embarnard | 📺 emiliebarnard

## Education

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### M.S. in Computer Science

*Santa Barbara, California*

UNIVERSITY OF CALIFORNIA, SANTA BARBARA  
COLLEGE OF ENGINEERING

June 2016  
4.0 GPA

### B.S. in Computer Science

with Honors Program Designation

UNIVERSITY OF CALIFORNIA, SANTA BARBARA  
COLLEGE OF ENGINEERING

June 2013

### B.A. in Mathematics

with Honors

UNIVERSITY OF CALIFORNIA, SANTA BARBARA  
COLLEGE OF LETTERS & SCIENCE

June 2013

## Experience

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### Instructor

*Sunnyvale, California*

GIRLS WHO CODE  
UNIVERSITY OF CALIFORNIA, SANTA BARBARA

June 2017 - July 2017

- This summer, I will be an instructor for the GWC Summer Immersion Program. Responsibilities include:
  - Leading instruction and maintaining an engaging and accessible classroom environment for a diverse group of 20 high school girls
  - Managing and assessing students' progress in and proficiency of hard and soft computer science skills
  - Managing Teaching Assistantss

### Lecturer in Computer Science

*Santa Barbara, California*

COMPUTER SCIENCE DEPARTMENT  
UNIVERSITY OF CALIFORNIA, SANTA BARBARA

June 2016 - Aug. 2016

- Taught two lectures of UCSB's undergraduate introductory computer science course during summer sessions  
This included:
  - Preparing and hosting lectures
  - Organizing Teaching Assistants
  - Writing and providing oversight in grading all assignments and exams
  - Hosting office hours

### Lead Teaching Assistant for *Introduction to Computer Science* Course

*Santa Barbara, California*

COMPUTER SCIENCE DEPARTMENT  
UNIVERSITY OF CALIFORNIA, SANTA BARBARA

Oct. 2014 - June 2016

- Assisted various professors in teaching UCSB's undergraduate introductory computer science course
- Led weekly programming labs
- Hosted twice-weekly office hours
- Organized responsibilities of other teaching assistants of the course
- Prepared and hosted lectures on occasion

### Computer Science and Mathematics Instructor

*Santa Barbara, California*

CAMPUS LEARNING ASSISTANCE SERVICES (CLAS)  
UNIVERSITY OF CALIFORNIA, SANTA BARBARA

Sept. 2013 - June 2014

- Organized and taught twice-weekly tutorial groups for students enrolled in *Calculus for Social & Life Sciences*
- Privately tutored students in mathematics and computer science courses

## Reader

MATHEMATICS DEPARTMENT

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

*Santa Barbara, California*

*Sept. 2012 - June 2013*

- Graded biweekly homework assignments for *Non-Euclidean Geometry* and discrete mathematics courses

## Organizations

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### Undergraduate Curriculum Committee Member

*Santa Barbara, CA*

COMPUTER SCIENCE DEPARTMENT

*Oct. 2014 - June 2016*

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

- Met bi-weekly with faculty and staff members of the committee
- Monitored and proposed changes to the undergraduate curriculum
- Developed policies for ensuring a healthy level of undergraduate enrollment in the department

### Graduate Student Cabinet Member

*Santa Barbara, CA*

COMPUTER SCIENCE DEPARTMENT

*Oct. 2015 - June 2016*

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

- Nominated by faculty to represent graduate students in the department
- Met monthly with the chair and other student cabinet members to discuss departmental changes

## Honors, Awards, & Nominations

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### Distinguished Teaching Assistant

*Santa Barbara, California*

COMPUTER SCIENCE DEPARTMENT

*June 2015*

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

Received for my work during the 2014-2015 school year. The purpose of the award is to “recognize those teaching assistants who went above and beyond to support our students and faculty” and “demonstrated this excellence again and again.”

### Graduate Student Association Excellence in Teaching Award (Nominee)

*Santa Barbara, California*

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

*2015, 2016*

This campus-wide award recognizes the dedication of graduate students who have shown excellence and have gone above and beyond in their roles as teachers.

### Women in Science and Technology Award Winner

*Nationwide*

VISIONARY INTEGRATION PROFESSIONALS

*July 2012*

The nationwide competition supports women seeking a career in computer science, information technology, or other applicable fields.

### South Coast Business & Technology Award Winner

*Santa Barbara, CA*

SOUTH COAST BUSINESS & TECHNOLOGY

*2009, 2010, 2011, 2012*

This award honors top individuals, organizations and companies who have contributed to helping the south coast of Santa Barbara County remain economically vibrant.

## Projects

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### Cellular Automata Encryption Generator

[HTTP://WWW.EMILIEBARNARD.COM/PROJECTS/CA.HTML](http://www.emiliebarnard.com/projects/ca.html)

This cellular automata encryption generator allows users to learn about CA encryption techniques in a visual manner. It allows the user to input any CA rule (mod 256) and set output preferences.

### Awesome Library

[WWW.PCONRAD.GITHUB.IO/AWESOMEPRELIMS/](http://www.pconrad.github.io/awesomeprelims/)

The idea of this discrete math library is to allow students to self-study various problems related to discrete math, such as set operations and relation classification. I created a 64-bit JavaScript number library which was used to automate question generation.