# D. Zack Garza

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EDUCATION	University of Georgia, Athens,GA, USA	Aug 2019 – Present
	<ul><li>Ph.D. in Mathematics (Expected)</li></ul>	
	University of California, San Diego, La Jolla, CA, USA	Aug 2015 – Jun 2018
	<ul><li>B.S. Mathematics</li><li>Minor in Computer Science</li><li>Major GPA: 3.723</li></ul>	
	University of California, Berkeley, Berkeley, CA, USA	Sep 2014 – Jun 2015
	<ul> <li>Concurrent Enrollment</li> <li>CS 70: Discrete Mathematics and Probability Theory</li> <li>EE 20: Structure and Interpretation of Systems and Signals</li> <li>Cumulative GPA: 3.33</li> </ul>	
	Sierra College, Rocklin, California, USA	Sep 2011 – Jun 2014
	<ul><li>A.A. Mathematics</li><li>A.S. Physics</li><li>A.A. Fine Arts</li></ul>	
WORKSHOPS AND TALKS	<ul><li>Mathematics Subject GRE Workshop</li><li>Homotopy and the Hopf Fibration</li></ul>	Mar 2019 Jun 2018
111110	<ul> <li>Topological Fixed Point Theorems</li> </ul>	Mar 2018
	<ul> <li>Homology and The Snake Lemma</li> <li>Algebraic Geometry: A Historical Primer</li> <li>Introduction to Functional Programming</li> <li>Intermediate LaTeX</li> <li>Intermediate LaTeX</li> <li>Intermediate LaTeX</li> <li>Organizing Research Projects with LaTeX</li> <li>Category Theory as an Organizational Tool</li> </ul>	Nov 2017 Oct 2017 Oct 2017 May 2017 Apr 2017 Feb 2017 Jan 2017 Jan 2017
	<ul> <li>Introduction to LaTeX</li> <li>Introduction to Category Theory, Part 2</li> <li>Introduction to Category Theory, Part 1</li> <li>Haskell for Mathematicians</li> <li>Discrete Mathematics: An Overview of Graphs and Trees</li> </ul>	Nov 2016 Nov 2016 Oct 2016 Oct 2016 May 2014
AWARDS	<ul> <li>UC San Diego Academic Enrichment Program Summer Undergraduate Research Scholarship (Declined)</li> <li>Diana C. Miles Scholarship</li> <li>Errett Bishop Scholarship</li> <li>Richard L. and Fern W. Erion and Laidlaw-Erion Scholarship</li> <li>Provost Honors (Muir College, UC San Diego)</li> </ul>	2018 2017 – 2018 2016 – 2017 2016 – 2017 2015 – 2016
SERVICE	Society of Undergraduate Mathematics Students, UC San Diego • President	2016 – 2018
	Mathematics Club, Sierra College ■ Officer	2013 – 2014
TEACHING	University of Georgia	
	■ Graduate School Teaching Seminar 1GRSC 7770)	Fall 2019

Private Tutoring 2014 – Present

 Calculus, Linear Algebra, Differential Equations, Real Analysis, Abstract Algebra, Complex Analysis, Point-Set Topology, Number Theory, Probability

### WORK EXPERIENCE

### Retail Scientifics, San Diego, CA

Jan 2016 - Aug 2019

- Data Scientist & Full Stack Engineer
  - API development for real-time predictive modeling and machine learning.

#### Google Summer of Code, Berkeley, CA

Apr 2015 - Aug 2015

- Student Developer
  - Contributed Haskell code to the open source project Hackage.

#### Shutterfly, Santa Clara, CA

Jun 2014 - Jan 2015

Winter 2018

Fall 2016

- Software Engineer, Intern/Contractor
  - Server-side compute graphics engine development in OpenGL for rendering 3D models.

# TECHNICAL SKILLS

Android, C, C++, ECMAScript, Bash, Git, HTML5/CSS3, Haskell, Java, Javascript, LATEX, MATLAB, Node, NumPy, OpenGL, PHP, Python, R, SAGE, SQL, Unix/Linux

#### **COURSEWORK**

#### **Graduate Coursework**

Algebraic Topology	Fall 2017 – Spring 2018
<ul> <li>Topics in Real Analysis: Quantum Mechanics (Graduate)</li> </ul>	Spring 2017
<ul> <li>Functional Analysis</li> </ul>	Fall 2016 – Winter 2017
■ Algebra	Fall 2017

## **Undergraduate Coursework**

• Design and Analysis of Algorithms

Cryptography

<ul> <li>Numerical Methods and Physical Modeling</li> </ul>	Fall 2017
■ Image Processing	Fall 2017
■ Applied Linear Algebra	Summer 2017
■ Partial Differential Equations	Summer 2017
■ Computer Vision	Spring 2017
■ Complex Analysis	Spring 2017
<ul><li>History of Mathematics (Hyperbolic Geometry)</li></ul>	Spring 2017
■ Theory of Computation	Winter 2017
■ Introductory Machine Learning	Winter 2017
■ Discrete Math and Graph Theory	Winter 2017

<ul><li>Number Theory</li></ul>	Summer 2016
<ul> <li>Advanced Data Structures</li> </ul>	Spring 2016
■ Knot Theory	Spring 2016
■ Point-Set Topology	Winter 2015
<ul> <li>Mathematical Algorithms and Systems Analysis in Computer Science</li> </ul>	Winter 2015
<ul><li>Probability</li></ul>	Winter 2015
<ul> <li>Software Tools and Techniques</li> </ul>	Winter 2015
<ul><li>Combinatorics</li></ul>	Fall 2015
<ul> <li>Abstract Algebra</li> </ul>	Fall 2015 – Spring 2016

<ul> <li>Abstract Algebra</li> </ul>	Fall 2015 – Spring 2016
■ Real Analysis	Fall 2015 – Spring 2016
<ul> <li>Mathematical Reasoning and Proof</li> </ul>	Summer 2015

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<ul> <li>Vector Calculus</li> </ul>	Summer 2015
<ul> <li>Structure and Interpretation of Signals and Systems</li> </ul>	Spring 2015
<ul><li>Assembly Programming (x86)</li></ul>	Spring 2015
■ C++ Programming	Spring 2015
■ Finite Mathematics and Linear Programming	Spring 2015
<ul> <li>Discrete Mathematics and Probability Theory</li> </ul>	Fall 2014

Structure and Interpretation of Computer Programs (Python)

<ul> <li>Elementary Statistics</li> <li>Introduction to Unix</li> <li>Discrete Mathematics</li> <li>Electrical Circuit Theory</li> <li>Differential Equations and Linear Algebra</li> <li>Data Structures</li> </ul>	Summer 2014 Summer 2014 Spring 2014 Spring 2014 Spring 2014 Fall 2012
<ul> <li>General Chemistry</li> <li>Physics: Mechanics, Electromagnetism, Optics, and Waves</li> <li>Calculus: Single and Multivariable</li> <li>Systems Programming with C</li> <li>Discrete Structures in Computer Science</li> <li>Object-Oriented Programming</li> </ul>	Spring 2013 – Summer 2013 Fall 2012 – Spring 2013 Fall 2012 – Spring 2013 Fall 2012 Fall 2012 Spring 2012