# 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>	
	<ul> <li>University of California, San Diego, La Jolla, CA, USA</li> <li>B.S. Mathematics</li> <li>Minor in Computer Science</li> <li>Major GPA: 3.723</li> </ul>	Aug 2015 – Jun 2018
	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	■ Mathematics Subject GRE Workshop	Mar 2019
TALKS	■ Homotopy and the Hopf Fibration	Jun 2018
	<ul> <li>Topological Fixed Point Theorems</li> </ul>	Mar 2018
	Homology and The Snake Lemma     Algebraic Cooperative A Historical Primer	Nov 2017 Oct 2017
	<ul><li>Algebraic Geometry: A Historical Primer</li><li>Introduction to Functional Programming</li></ul>	Oct 2017
	■ Intermediate LaT <sub>F</sub> X	May 2017
	■ Introduction to LaTeX	Apr 2017
	■ Intermediate L <sup>A</sup> T <sub>E</sub> X	Feb 2017
	■ Organizing Research Projects with LATEX	Jan 2017
	<ul> <li>Category Theory as an Organizational Tool</li> </ul>	Jan 2017
	■ Introduction to LATEX	Nov 2016
	■ Introduction to Category Theory, Part 2	Nov 2016
	<ul><li>Introduction to Category Theory, Part 1</li><li>Haskell for Mathematicians</li></ul>	Oct 2016 Oct 2016
	<ul> <li>Discrete Mathematics: Graphs and Trees</li> </ul>	May 2014
PRESENTATIONS		
PRESENTATIONS	<ul> <li>Poster: Spectral Sequences and Higher Homotopy Groups of Spheres</li> <li>UC San Diego Undergraduate Research Symposium</li> </ul>	2018
	od bull Brego Gladergradaute Reseuren bynnpostani	2010
AWARDS	<ul> <li>UC San Diego Academic Enrichment Program</li> </ul>	
	Summer Undergraduate Research Scholarship (Declined)	2018
	<ul><li>Diana C. Miles Scholarship</li><li>Errett Bishop Scholarship</li></ul>	2017 – 2018 2016 – 2017
	Richard L. and Fern W. Erion and Laidlaw-Erion Scholarship	2016 – 2017
	<ul> <li>Provost Honors (Muir College, UC San Diego)</li> </ul>	2015 - 2016
SERVICE	President, Society of Undergraduate Mathematics Students, UC San Diego	2016 – 2018
CLICATOL	Officer, Mathematics Club, Sierra College	2013 – 2014
	Officer, Maniemanes Club, Sterra Conlege	2013 – 2014
TEACHING	University of Georgia	
	■ Graduate School Teaching Seminar (GRSC 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, time-series forecasting, 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 2017

- Software Engineer, Intern/Contractor
  - Developed server-side OpenGL 3D graphics engine and associated mathematical libraries.

#### **COURSEWORK**

#### **Graduate Coursework**

<ul><li>Algebraic Topology</li></ul>	Fall 2017 – Spring 2018
<ul> <li>Quantum Mechanics for Mathematicians</li> </ul>	Spring 2017
<ul><li>Functional Analysis</li></ul>	Fall 2016 – Winter 2017
■ Algebra	Fall 2017

## **Undergraduate Coursework**

Cryptography

<ul> <li>Numerical Methods and Physical Modeling</li> </ul>	Fall 2017
■ Image Processing	Fall 2017
■ Applied Linear Algebra	Summer 2017
<ul> <li>Partial Differential Equations</li> </ul>	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>Design and Analysis of Algorithms</li> </ul>	Fall 2016

Summer 2016
Spring 2016
Spring 2016
Winter 2015
Winter 2015
Winter 2015
Winter 2015
Fall 2015

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

Discrete Mathematics and Probability Theory
 Structure and Interpretation of Computer Programs (Python)
 Fall 2014

Elementary Statistics
 Introduction to Unix
 Discrete Mathematics
 Summer 2014
 Spring 2014

<ul><li> Electrical Circuit Theory</li><li> Differential Equations and Linear Algebra</li><li> Data Structures</li></ul>	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