

Zachary Dagnall

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[GitHub](#) || [LinkedIn](#)

A full-stack software engineer with rich experience in programming, mathematics, and teaching, coupled with a passion for serving others and finding innovative ways to analyze, problem-solve, and communicate.

Education

Flatiron School - Full-Stack Software Development Bootcamp Apr 2021
Master of Science in Pure and Applied Mathematics - Montclair State University Jan 2018
Bachelor of Arts in Mathematical Sciences - Kean University Jan 2016
CS Courses: Data Structures & Algorithms, Analysis of Algorithms, Robotics & Automation,
Computer Organization & Programming, Fundamentals of Computer Science

Projects

- **Couchbound Traveler** (Ruby on Rails, Javascript, React.js, HTML, CSS) | [GitHub](#) | [Demo](#)
 - Architected a web app for emulating travel around the world using street-view images and a chat feature
 - Implemented Mapillary imagery and functionality
 - Structured the logic for a chatbot, producing the effect of talking to a “local” - including support in several other languages
 - **GameBoyzArcade** (Ruby on Rails, Javascript, HTML, CSS) | [GitHub](#) | [Demo](#)
 - Collaborated with a teammate to create and design a website for playing games
 - Designed and implemented a single-page web app using a Ruby on Rails backend with a JavaScript frontend
 - Built out responsive capabilities for both mobile and desktop usage
 - **Cellar Seller** (Ruby on Rails, Javascript, React.js, HTML, CSS) | [GitHub](#) | [Demo](#)
 - Fashioned a website to view listings and price stats for second-hand/resale items
 - Scraped external web pages to find listings meeting a user’s search query
 - Utilized Auth, JSON Web Tokens, and localStorage to allow for secure logging in and staying logged in
 - **Hangman** (Ruby, TTY Prompt) | [GitHub](#) | [Demo](#)
 - Created a CLI game in which a user can play Hangman, manage past scores, and choose to receive hints
 - Pair-programmed with a partner, making use of GitFlow development paradigms
 - Leveraged ASCII art and sounds in terminal to create a robust UI/UX
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Experience

Adjunct Professor, Mathematics Jun 2016 - Dec 2020
Prison Program, Raritan Valley Community College (Algebra, Number Systems)

- Taught a variety of college math courses to classes of inmates inside various prisons across NJ
- Restructured curriculum to flow in a more intuitive order, resulting in an increase of students’ learning and retention
- Adapted teaching format to an environment with more restrictions than traditional on-campus instruction

Kean University (Discrete Structures, Calculus 1, Applied Statistics)

- Created lesson plans and exams that made course material interesting, relevant, and fun to a young generation
- Used a discussion-driven approach to engage students and help them focus on core concepts

Montclair State University (Pre-College Algebra, The Development of Mathematics)

- Taught fast-paced condensed-session courses to students in the EOF program
- Helped struggling students change their way of thinking about key concepts in order to succeed where they had previously failed

Tutor (Math, Java, Grammar, Physics, Test Prep) Nov 2010 - Nov 2020

- Used a question-driven style to help students arrive at answers themselves and deeply understand fundamental concepts
- Developed rapport with students to increase not only their grades but their confidence in their own abilities and understanding
- Guided students in preparing for SAT, SAT Subject, and AP exams, resulting in high and perfect scores

Academic Advisor - Prison Program, Raritan Valley Community College Jan 2020 - May 2020

- Acted as a liaison between the college and the inmates enrolled in the college program
- Administered sensitive paperwork and proctored exams

Leadership

Christ Community Church Bible Study | Piscataway, NJ Feb 2013 - Sep 2019

- Co-founder and co-leader of a group of approximately 30 Christian young adults
- Organized the logistics for several annual events, including travel, scheduling, food, and finances

Technologies

Ruby On Rails, Javascript, React.js, HTML, CSS, Java, SQL, PostgreSQL, Git, ActiveRecord, Python, C