

Adrian Ferenc, PhD

SKILLS

Developer, educator, and mathematics PhD able to understand, break down, and creatively solve complex, technical problems; strong team-work, leadership, and written and oral communication skills with both expert and lay people cultivated during 10+ years of experience; and a mastery of: Javascript, Python, LaTeX, Mathematica, HTML, CSS, Django, Express.js, Flask, React, Redux, Node.js, MongoDB, Mongoose, PostgreSQL, SQL, Git/GitHub/GitLab, Model View Controller, Model View Template, REST API

EXPERIENCE

Aqueous Asset Inc., Remote — *Software Engineer*

DECEMBER, 2021 - JULY, 2022

- Help design and implement new features; maintain, improve, and optimize existing features; troubleshoot and debug issues both in the front and back ends of a SaaS (Software as a Service) product
- Act as liaison between engineers working in the front and back ends and perform any duties that require work in both environments
- Harvest and refine data and build data-informed mathematical algorithms used in the application
- Handle Git responsibilities, including reviewing code and merge requests and updating stages of environment infrastructure
- Collaborate with colleagues and management about new features, functional and computational improvements, mathematics, architecture, and user interface
- Implement and maintain a style guide to ensure all members of the R&D team's code is consistent and following best practices

The Waverly School, Pasadena, CA — *Math Teacher*

FEBRUARY, 2016 - JULY, 2020

- Teach math and programming classes ranging from beginning high school to college equivalent; develop curriculum for eight different courses by designing assignments, assessments, and course material; provide semi-annual narrative feedback for an average of 60 students per semester
- Serve as Mathematics Curriculum Coordinator on a cross-divisional team of teachers and administrators for a school-wide reassessment of math curriculum for grades K-12
- Present several times a year to parents; conference daily with students and semi-annually with parents; deliver speeches honoring graduating seniors

University of California, Irvine — *Lecturer/Teaching Assistant*

SEPTEMBER, 2009 - SEPTEMBER, 2016

- Teach, develop curriculum, and write assignments for over 20 lower- and upper-college level math classes with class sizes ranging from 15 to 120 students
- Manage TAs and delegate responsibilities for the class

FEATURED PROJECTS

AskAva.net — Aqueous Asset Inc.

Technologies: Node.js, React, Express, Mongoose, HTML, CSS, Javascript, Plotly.js, AWS

- Authentication and Authorization for the React application
- Error logging system based on a REST API on the front and back ends; front end diagnostic console to view, search, and filter errors, as well as other database information to help developers, customer service, and those in the C-suite
- User history functionality to easily access previous searches and load the data from any of those searches
- Interactive data visualization tool allowing the user to assign weights to various valuations presented as circles, or "planets" and see the composite valuation, also a planet, move as if the valuations' respective "gravities" exerted different amounts of force on the composite

Online Atlas of Integer Sequences — General Assembly

Technologies: HTML, CSS, Javascript, Mongoose, Express, React, Node.js, Axios, Bcrypt, Plotly.js

- The user has access to the OEIS with the UX overhauled; The user can view any sequence as a list or triangular array, with the ability to apply a modulus to the numbers and/or a color gradient indicating the modulus, allowing the user to get a better understanding of the sequence visually; The user can view as many terms as they like as a scatter plot, a logarithmic scatter plot, or a histogram

AWARDS, FELLOWSHIPS, AND WORKSHOPS

Professional Development in Diversity, Equity, and Inclusion

The Waverly School DEI Development Workshop 2019-2020 (planner, organizer, and facilitator); Teaching Tolerance, 2020; Visions Inc., 2018, 2019

Graduate Assistance in Areas of National Need Fellow

University of California, Irvine, 2010, 2012, 2013, 2015

Outstanding Mathematics Teaching Assistant Award

University of California, Irvine, 2015

Benedict Freedman Senior Prize in Mathematics

Occidental College, 2008

EDUCATION

General Assembly, Remote

Software Engineering Immersive

JUNE, 2021 - AUGUST, 2021

- Learned and honed current best-practices for web development with an emphasis on the MERN Stack, working individually and as a member of a team

University of California, Irvine

PhD and MS in Mathematics

SEPTEMBER, 2009 - AUGUST, 2015

- Dissertation, "An Explicit Construction for Homotopy Monoidal Structure," in the area of Noncommutative Algebra

Occidental College, Los Angeles, CA

BA in Mathematics, with Honors

AUGUST, 2005 - MAY, 2008