

TECHNICAL SKILLS

- Web: JavaScript, ES6, RequireJS, jQuery, Lodash, gulp, nodejs, Angular, Electron, CSS3, SASS, Autoprefixer, HTML5, Wordpress, JSON, websockets, SVG, MathJax, D3
- Concepts: OOP, modules, templating, basic networking
- Languages & DB: Python, Tornado, pytest, LaTeX, Perl, RegExp, Moose, Mojolicious, MongoDB, SQL
- Other: zsh, bash, sh, Amazon Web Services (AWS), DigitalOcean, Travis
- Applications: git, GitHub, Sublime Text, Vim, MATLAB, Octave, Ox, Sage
- Operating Systems: Darwin (OS X), FreeBSD, Linux

TECHNICAL PROJECTS*github.com/MareoRaft*

provemath.com – “largest” project (the repo is private, the website is public):

- Website (served with Tornado on FreeBSD) to store/learn/share math knowledge, not unlike Wikipedia.
- Users login via OAuth and create nodes (visualized via D3.js) that store math content (with MathJax).
- Nodes connected with directed edges via a dependency structure (and stored in MongoDB).
- Extensive graph algorithms (on top of NetworkX) to suggest the next content for the user to learn.
- User preferences and learning progress persist across logins.

For more projects, take a look at **k_combinat_for_sage**, **Regex**, **Chessmojo**, and **node** on github.com/MareoRaft.

PROFESSIONAL EXPERIENCE

University of Virginia *Math Instructor*

September 2016 - present

- Calculus II TA (Fall 2016), Calculus III TA (Spring 2017), Calculus I Instructor (Fall 2017, Spring 2018)

KnewWaves.com

Summer 2016

- I was with KnewWaves at its inception in 2016. I wrote code (in Python) for a configurable content framework, delivery from the content creators to the database, and template to random question generation.

Khan Academy *SAT Math Content Writer*

August 2014 - January 2016

- Responsible for writing math questions conforming to College Board SAT and Khan Academy standards.
- Developed a JavaScript library (a wrapper around Raphaël) for SVG image generation.
- Collaborate with peers on potential math content issues and identify resolutions.

Instructorium *Founder*

2013 - May 2014

- Started independent tutoring company teaching mathematics, violin, and tennis.
- Created website using Wordpress, HTML, CSS.
- Grew business to 18 lessons per week.

Rutgers Psychometrics Research Project *Intern*

Summer 2011

- Translated Ox/MATLAB code into C++. This code ran the DINA model, which fits specific test results to predicted skill sets of test takers. This required complex algorithms used in large data computation.
- Part of team responsible for defining specific skills related to proportional reasoning. We established grading schemes that quantitatively reflected mental abilities used by test takers on each question.

HONORS

- National Merit Scholarship
- AP Scholar Award (Scored 5 on 7 AP exams)
- GRE score: 97th percentile in both Math and Reading
- Full Tuition Scholarship at Rutgers University
- Henry Sanders Scholarship for excellence in math
- Mathematics GRE scaled score: 840 (86th percentile)

EDUCATION

University of Virginia, *Charlottesville, VA*

August 2016 - May 2018

Masters in Mathematics – GPA 3.78

Rutgers University, *New Brunswick, NJ*

graduated May 2013

Bachelor of Science in Mathematics – GPA 3.94

Bachelor of Arts in Music – GPA 3.89