



Danny Ou

Full Stack Engineer / Mechanical Engineer

Contact

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Skills

Programming

Ruby on Rails	Ruby
SQL	HTML
React.js	Redux
CSS	JavaScript
MATLAB	Bash

Engineering Programs

AutoCAD	REVIT
TRACE 700	COMSOL
LabView	Pro/ENGINEER

Education

App Academy, New York

Binghamton University, SUNY
(ABET accredited)

Masters of Science,
Mechanical Engineering
GPA: 3.88/4.00
Graduated in 5/2012

Minor,
Mathematics
GPA: 3.74/4.00

Projects

Full Stack: [Int-structables @GitHub](#) (Rails, PostgreSQL, JavaScript, React/Flux)

A full-stack, single-page calculus instructional webpage. The frontend is written in JavaScript, React and Flux with the backend written in Rails. File uploading is done using Amazon Web Services.

- Custom-built Math Text Editor using MathQuill and DOM manipulation to allow users to input beautiful semantic inline math symbols.
- Implemented an image upload feature allowing users to drop and store multiple images on the cloud using Ruby Gem Paperclip, React Drop Zone, and Amazon Web Services.
- Optimized a Search feature that queries the PostgreSQL database only after a settable amount of time has passed.
- Implemented a CRUD framework for users to showcase different Calculus ideas.

Front End: [CalcuGraph @GitHub](#) (JavaScript, Canvas, CSS, jQuery, MathQuill, and mathjs)

A single-page interactive graphing application allowing panning, zooming, and approximating tangent lines and areas under the curve.

- Leveraged Canvas flexibility and speed to present rich graphs.
- Approximated area under the curve using Left Endpoint Riemann Sums.
- Created a seamless and real time rendering of function input using MathQuill.

Code Intensive: [DOMinate](#) (DOM interaction library)

DOMinate is a JavaScript DOM interaction library inspired by jQuery:

- Created a library to manage core DOM manipulation functionality, making AJAX requests and event handling with native DOM API.

Work Experience

MG Engineering: Mechanical Designer

4/2016- 11/2016

Description: Assisted Senior and Principal Engineers in HVAC with focus on Variable Refrigerant Flow (VRF).

- Calculated heating and cooling load on residential and commercial buildings using TRACE
- Specified VRF equipment for design loads using multiple vendors. Equipment footprint, cost, and performance were evaluated for final recommendation to clients.
- Produced Construction Documents in HVAC for high rise residential and commercial buildings using REVIT and AutoCAD.

ME Engineers: Mechanical Engineer

10/2014- 3/2016

Description: Assisted Senior Engineers in HVAC, Plumbing, and Fire Protection designs.

- Re-designed a cooling system for a 300kW data center using high density modular units.
- Assisted in completing initial design work for Madison Square Garden, and an Ice Center.
- Supported senior engineers in design calculations, surveying, specifying equipment, and researching applicable mechanical, energy and building codes.

Knolls Atomic Power Laboratory: Mechanical Engineer

4/2013- 9/2014

Description: Rotational projects in the Engineering Leadership Development Program.

- Programmed a data post processing tool to correlate relationships using least square regression (MATLAB).
- Led a research project consisting of nuclear and material engineers to support longer usability of nuclear reactors.