

GRANT PHELPS

UX ENGINEER

gbphelps@aya.yale.edu • 706.474.5548

[PORTFOLIO](#) • [GITHUB](#) • [LINKEDIN](#)

EXPERIENCE

IEX, THE INVESTORS EXCHANGE | UX Engineer • New York, NY | Nov '18–Present

- Responsible for all aspects of website design at iexastral.io
- Design data visualization library for SVG and React
- Create generative PDF reports for 606b3 visualizations
- Design cross-client compatible email templates using Jinja2 and python
- Create drag & drop file uploader to support folders, multiple uploads, and nested directories
- Design widgets for visualizing stock data from IEX Cloud API
- Maintain Redis task to clean monthly market quality stats and create [visualization](#)
- Develop 3D visualization of order flow and stock exchange architecture using THREEjs

COGNITION IP (YC '18) | Developer & Patent Engineer • San Francisco, CA | Jul–Oct '18

- Designed feature to autofill USPTO forms using MEAN stack
- Built platform to improve communication between staff attorneys and clients
- Drafted patent claims and specifications to be filed with USPTO

GARTNER | Editor at L2 • New York, NY | Feb '17–Mar '18

- Lead editor for all levels of L2 organization (7 teams, 30+ researchers)
- Edited 100+ pages of research per month for statistical accuracy and clarity
- Hosted writing workshops for junior researchers

W. W. NORTON | Editorial Assistant • New York, NY | Aug '15–Feb '17 (Intern May–Aug '15)

- Principal editor for textbook ancillaries and managing editor of music blog
- Recruited professors for peer reviews and managed editorial interns
- Wrote flap copy, editorial pitches, and press releases
- Projects include first editions of: Help! (The Beatles and Duke Ellington), Playing for Their Lives (El Sistema), Beethoven's Symphonies, Ella Fitzgerald biography

EDUCATION

YALE UNIVERSITY

BS Engineering Science
Mechanical, with honors

New Haven, CT
2009–2013
GPA 3.77

Programming Coursework

Mechatronics	C, Microcontrollers
Computer Aided Eng.	MATLAB, SolidWorks
Programming for Engineers	C++, Fortran 77
Intermediate Programming	Scheme (LISP)

Senior Capstone

Built an electric stair-climbing dolly with a max load of 50lbs. Selected motor, sprockets, and chain; designed mounting plate in SolidWorks.

Senior Project

Force simulations on designer particles with negative Poisson ratios using SolidWorks and MATLAB.

PROJECTS & SKILLS

React + Redux | Angular | Express | Node | Ruby on Rails | PostgreSQL | npm | Webpack | Git

COLOR PICKER

Experiment with color math and irregularly shaped sliders

- Reusable UX components for horizontal, circular, and triangular sliders
- Custom antialiasing algorithm applied to conical gradient in canvas bitmap

PERLIN SIMULATOR

Aesthetic, ever-changing particle simulation

- Traces paths of point masses as they pass through a vector field of Perlin noise
- Uses bilinear interpolation to calculate forces within random vector field
- Plots up to 2,000 particles in real time

CAL9000

UX components for calendars and date pickers

- Custom calendar tool replaces browser-native date picker
- Support for events spanning multiple days, weeks, and months

DRAMAMINE

3D hoop-jumping game named for the pill you'll want afterward

- Torque-based first-person controls
- Vector calculations for collision detection
- Random hoop course generated in real time

BEZIER BUILDER

Interactive SVG app built with vanilla JS

- Add points by clicking and dragging to visualize an N-dimensional bezier curve
- Implements simulated drag-drop events that replace browser-native drag events
- Animation helps user to visualize recursive nature of Bezier algorithm