

Molly Lloyd

Software Engineer | San Francisco, CA

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Technical Skills

JavaScript, AngularJS, Node, Express, D3.js, SQL (MySQL, PostgreSQL), PostGIS for Postgres, MongoDB, Backbone, Git, Grunt, Gulp, AWS EC2 + S3, Heroku, R, Python (pandas, numpy, sci-kit learn, matplotlib), SAS, Matlab, Stata, R, ArcGIS

Projects

Wiggler, product owner and full-stack engineer

wigglersf.com

A responsive web app that uses custom routing algorithms to provide elevation-aware routing in San Francisco

- Leveraged physical models of biking and walking velocity to implement several custom Dijkstra's pathfinding algorithms
- Built a graph-like PostGIS + PostgreSQL database of San Francisco map data on AWS and populated it with elevation data at each node (1.8 million total) from Google's Elevation API while adhering to the API's rate limit and daily request quota
- Developed front-end features including 3D map and data visualization using the Mapbox.js API and custom turn-by-turn directions based on the results of our path-finding algorithms

Knapsack, full-stack engineer and UI designer

knapsack-app.herokuapp.com

A web app that allows users to seamlessly organize, save, and share their favorite books

- Implemented session management, built single-page front-end with Angular UI, and integrated back-end services with client
- Wireframed, designed, and implemented the app's user experience using Adobe Illustrator, Bootstrap, and CSS

Game Plan, full-stack engineer

github.com/gameplan-app/gameplan

A tool for users to plan recreational activities with friends using geolocation and custom reservation software

- Inherited legacy codebase, refactored and modularized existing files, and converted product into a social reservation platform
- Implemented a MongoDB database using MongoLab and managed front-end integration with the server and database

Localist, product owner and full-stack engineer

github.com/mollymerp/localist

A single-page web app for sharing location-based recommendations with friends, family, or your website's readers

- Individually executed end-to-end development and design using MongoDB, Express, Node, jQuery, and the Mapbox.js API
- Converted user input into GeoJSON to render map features in real time and saved the data in MongoDB

Experience

Federal Reserve Board of Governors, Senior Research Assistant

2013-2015

Office of Financial Stability Policy and Research

- Independently developed a geographic data visualization component for the annual bank stress-testing program (CCAR) to facilitate examination of banks' geographic risk profiles using SAS, ArcGIS, and Matlab Mapping Toolbox
- Analyzed confidential database containing the universe of domestic mortgages using SAS, Python, and Postgres and created a mortgage market health monitoring system to flag potential risks for regulators

Education

MakerSquare – a Hack Reactor School, Advanced Software Engineering Immersive

2015

Harvard Extension – online coursework towards a Data Science certificate

2013-2014

- CS 171 - Data Visualization: instruction in D3.js, final project selected as one of the top three in the class
- CS 109 - Data Science: instruction in Python, topics covered included statistical modeling and machine learning

University of Wisconsin – Madison, BS in Mathematical Economics

2009-2013

- Academic and leadership scholarship recipient, Phi Beta Kappa, graduated with honors and distinction
- Coursework: Multivariable Calculus, Linear Algebra, Differential Equations, Probability Theory, Econometrics, Cartography for print and web, Cartographic design

About

Hello! I am a software engineer with a passion for education, social justice, and public service. I have experience volunteering within the DC foster-care system as a court appointed special advocate (CASA) and with several violence prevention organizations in Dane County, WI. In my free time I enjoy reading, dreaming of adopting a dog, and learning new technologies.