Mary Elizabeth Breen-Lyles

PROGRAMMER - ENGINEER - CARTOONIST

CONTACT

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EDUCATION

M.S. MECHANICAL ENGINEERING
Northern Illinois University
August 2019 (GPA: 3.9)
- Thesis publication 2019

B.S. PHYSICS
Beloit College
May 2017 (GPA: 3.9)
- Walter S. Haven Physics Prize 2017
- Departmental Honors 2017
- Presidential Scholarship 2014-2017

VOLUNTEERING

Food Distributor
Volunteer food and donation transport 3-4 days a week for The Love Fridge Chicago mutual aid group

Farm Worker
Volunteer farm and construction labor at Urban Growers Collective 2 days a week Spring - Fall

Neighborhood Point Person
Assist with coordination, communication, and donation transport for Lakeview Mutual Aid

SKILLS

Ruby on Rails	Python
GraphQL	Java
Celery, RabbitMQ	PHP
Redis	ReactJS
ElasticSearch	jQuery
MySQL, Postgres	Git
Test Driven Development	Postman
API construction/consumption	Jira
Project Estimation	VS Code
Client Communication	CircleCI
Windows/MacOS/Linux	Patience

SUMMARY

Fast-learning, critically-thinking, conscientious worker with design and programming experience from a broad set of research and web development projects. Lover of people, sincere communication, math, problem-solving, and peanut butter. Genuine enthusiasm for learning and growth!

WORK EXPERIENCE

2020 **Software Engineer,** Fooda, Inc.
Chicago, IL (March 2020 - October 2020)

- Full stack development for a scalable, distributed e-commerce and scheduling management platform used by customers, restaurant partners, and internal team members
- Provided immediate value debugging and adding features to an existing monolith application, writing unit tests and documentation, and participating in code reviews
- Collaborated with designers and engineers to build APIs, web services and UIs, using a CI/CD and agile development methodology with a focus on test-driven development
- Primary contributions included: refactoring an ElasticSearch index and searchkick model to use a repository pattern; adapting and constructing GraphQL endpoints; writing migrations for a Postgres database; updating and refactoring components in a React frontend utilizing hooks; deploying code to a production server on a rotating schedule
- Patiently and efficiently formulated complete, tested solutions, while avoiding building onto or implementing band-aid fixes

2019 **Freelance Software Developer,** Self
Chicago, IL (July 2019 - February 2020)

- Independently built web tools and applications for clients, communicating effectively and amicably to maintain positive client relationships
- Drew up thorough design documents and estimates, delivering on time and within budget
- Created 2 mobile responsive front end web tools in PHP and JavaScript leveraging Amazon's Product Advertising API and integrated into the existing customer site
- Built an extensible Amazon web scraper with Selenium for harvesting product data at managed intervals, and storing results and comprehensive logs in ElasticSearch; Utilized Celery with Redis for parallel processing and data buffering, and included extensive exception handling to precisely identify potential issues

2018 **Graduate Research Assistant,** Northern Illinois University
DeKalb, IL (January 2018 - August 2019)

- Executed dynamic molecular computations across distributed systems, applying Tcl and Python scripting to analyze output data, and publishing a thesis paper on the process/results
- Compiled LAMMPS from C++ source code with MAKE, using Linux as both development and runtime environment
- Ancillary use of a remote Linux HPC cluster for simulation processing
- Quickly learned an assortment of MD simulation/visualization software, with Tcl/Python3 scripts and Excel for data analysis and acquisition

2017 **Research Assistant,** Beloit College
Beloit, WI (August 2016 - May 2017)

- Repaired proton accelerator via machining and configurational planning for new/existing instrumentation
- Extensive work on electromagnet (fix cooling system, field tuning, Faraday cup implementation, electrical load and bending angle calculations, development of predictive models)