Neema S. Sadry

SOFTWARE ENGINEER

neemasadry@gmail.com • (810) 434-3277

GitHub: neemasadry & snake117 • **LinkedIn:** neemasadry

– Work Experience –

Software Engineer Intern – InfluxData May 2022 – August 2022

- Built general marketplace simulator app (GeMS) for AWS using Elixir, Phoenix, Ecto, PostgreSQL, and Tailwind CSS, which was used to simulate roughly 70% of the user onboarding process; worked on all levels of Phoenix app.
- Designed and built a queuing and notification service to send user-registration messages to local queues during the subscription process; 40% faster performance. Local queue polling at regular intervals to simulate AWS SNS & SQS; built using ExAWS and ElasticMQ (running in Docker), which stored dynamically sent notifications.
- Undertook agile and TDD practices during pair programming and code review sessions with team utilizing Git/GitHub, CircleCI, ConfigCat, Kubernetes, etc.; able to navigate *Quartz* codebase, which runs InfluxDB Cloud.
- Collaborated with other interns to build a stock trading model using Python & InfluxDB during Hackathon week.

– Projects –

Caliber [Render] – Rails app, Scrapy, and ML projects May 2023 – Present

Premier social network for exploring the fashion world. *Participated in Y Combinator's Startup School*

- Ruby on Rails app where users can create, share, and review outfits and products from popular brands.
- Achieved responsive design for various screen sizes by using Tailwind CSS and Hotwire.
- Deployed app successfully to production on both Heroku (CI/CD via GitHub Actions) and Render.
- Integrated various Ruby gems and services like Sidekiq (workers), AWS S3 & CloudFront, and Meilisearch Cloud.
- Extracted, sanitized, and stored 10,000+ products (~100 GB total) on AWS S3 from popular brands (e.g., *Dior*, *Fendi*, *Prada*, *Nike*, *Zara*, etc.) by writing custom spiders for each website/API.
- Optimized and refactored spiders by minimizing requests to servers while abstracting and reducing code per spider, achieving full product data extraction ethically. Metrics: Reduced requests by 50%, decreased spider LoC by 30-70%.
- Used SQLAlchemy to interface Scrapy project with PostgreSQL and Alembic for database migrations.
- Prevented repeat crawl sessions entirely by backing up data in JSON Line file batches, and subsequently uploading them to AWS S3, after experiencing two events where all scraped data of certain brands were lost on local machine.
- Brainstorming solutions for precise product categorization using machine learning and NLP.

Computer Graphics using C++ & OpenGL Feb 2023 – April 2023

- Created a 3D video game environment using C++, OpenGL, and Visual Studio IDE for my *Computer Graphics* course.
- Built custom systems for rendering the current viewport's frame, importing various files (e.g., OBJ, textures, images, etc.), rendering skybox, device I/O, shading, local and global illumination processing with ray tracing, etc.
- Rendered 3D models by first writing a Python script (OpenCV) to extract images from 4K videos of rotating models, subsequently processed by GPU in COLMAP (Poisson) for point cloud data, then used to render model in MeshLab.

Parallel Computing in C/C++ with Pthreads, OpenMP, and MPI Sep 2022 – Dec 2022

- Assignments from my *Parallel Computing I: Programming* course; comparing parallel vs sequential implementations.
- Used C & C++, a few libraries/APIs, and the university's grid for high-performance computing (HPC). Examples: (1) Adding two 256x256 matrices using Pthreads, (2) adding two 2048x2048 matrices using MPI on 8 processors, (3) multiplying two square matrices using OpenMP with 1, 2, …, 32 thread sizes, (4) and parallelized odd-even algorithm.

– Education –

WAYNE STATE UNIVERSITY – COLLEGE OF ENGINEERING **Detroit, MI**

M.S., Computer Science, with concentration in Artificial Intelligence Aug 2021 – Aug 2023

Post-Baccalaureate, Computer Science – GPA: 3.86 Sep 2019 – May 2021

WAYNE STATE UNIVERSITY – SCHOOL OF MEDICINE **Detroit, MI**

M.S., Basic Medical Science May 2017

UNIVERSITY OF MICHIGAN **Ann Arbor, MI**

B.S., Neuroscience with minor in Near Eastern Languages and Cultures May 2014

– Skills –

Certification(s): C)ISSO: Certified Information Systems Security Officer - Mile2 (Certificate Code: 23068-168-262-9086)
Languages: Ruby, Python 3, Elixir, JavaScript, C, C++, HTML, CSS, SQL; *Go, Rust, Java, C#, Lua* (intermediate)
Libraries: Rails, Hotwire, Sidekiq, Scrapy, Phoenix, Tailwind CSS, NumPy, OpenGL, Pthreads, OpenMP, MPI, React.js, Next.js
DBs: PostgreSQL, MySQL, Ecto, ActiveRecord, SQLAlchemy, Alembic, MongoDB, Redis, Meilisearch, Elasticsearch, InfluxDB
Cloud: GitHub, GitLab, Fly.io, Heroku, AWS, Zyte, CircleCI, Meilisearch Cloud, Cloudinary, Namecheap, Stripe, Font Awesome
Misc.: Git, Homebrew, asdf, iTerm, Docker, ElasticMQ, Sublime Text, VS Code/IDE, Unreal Engine 5, Unity, Roblox, Xcode, NPM/Yarn, Office 365, Windows, macOS, Linux, UNIX, zsh, Bash, Kubernetes, Postman, 1Password, Obsidian, Splash, Selenium, Webpack, REST, XML, JSON
Other: Farsi (Persian), Building Computers, Neuroscience, Biomedical Science, Lab & Clinical Research, Piano, Warhammer 40K
Keywords: Agile, TDD, Backend, Frontend, Fullstack, Software Engineer, Game Development, Data Structures, Algorithms, Computer Graphics, Operating Systems, NoSQL, DevOps, MVC, HTTP/S, TCP/IP, SSL, DNS, Networks, Cybersecurity, UI/UX, Parallel Computing, AI, ML, OOP, FP, DNS, Bot Detection, Payments