DAVID WARD

Software Engineer

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EXPERIENCE

Full Stack Web Developer

Layers Media

July 2022 – Dec 2022

- Worked on all aspects of tech stack related to social media site
- Shipped 27 bug fixes and features in a fast paced, highly independent work environment
- Contributed to models with extensive data validation and unit testing and added to controllers and views with integration testing
- Improved integrity of code base by eliminating inconsistent failing tests by determining root cause to be due to data generation library, Faker, and sample size constraints
- Methodically debugged front end Stimulus JavaScript controllers, Tailwind CSS issues, CSS media queries, and video processing jobs via sidekiq worker tasks
- Contributed modular front end components using .html.erb partials
- Utilized scopes to filter data based on business logic
- Chose architecture for tagging feature and implemented fluid UI using Stimulus.js

PROJECTS

Blog Clone

ruby on rails, .erb, heroku, postgresql, html/css

Jan 2023 — Jan 2023

- Full stack MVC blog clone to display aptitude in the following: inviting interfaces, user authentication, data validation, unit and functional testing, and CI/CD

Protein Domain Annotations Database SPA (CSUN Lab)

angular, typescript, c#, entity framework core, azure sql

Jan 2022 — May 2022

- Open source, full stack MVC web app using separation of concerns
- Angular was used for the client side and C# for the back end with object relational mapping to communicate with the data layer
- The front end is deployed on a remote server, the back end on Azure App Services, and the database on Azure SQL Server
- The app enables novel analysis for bioinformatics researchers' by compiling non-uniform protein data from many databases

GPU Enabled Protein Conformational Sampling (CSUN Lab)

python, numpy, pycuda, cuda c/c++

Sep 2020 — Dec 2021

- Developed boilerplate app to run patented molecular dynamics simulation in parallel on GPUs using PyCUDA/CUDA framework
- Refractored legacy, hard coded C++ structural protein input parsers into OOP generated, scalable, strongly typed data structures
- Presented in semesterly research and literature talks/seminars

EDUCATION

B.S. Computer Science

California State University Northridge

Aug 2018 — Dec 2021

Senior Project research project published in 2022 IEEE ML and Applications Conference:

- Project used ML to predict fires with 93% accuracy from raw geospatial image data
- Data preprocessing engineer, web developer, and project manager
- Co-led initiative to increase spatial granularity of analysis regions by a factor of 60 by sub-setting data into counties using image masking
- Created SPA map to visualize past spatiotemporal fire data using D3.js and GeoJSON data
- Presented in senior design showcase

SKILLS

Proficient: C++ | Python

Moderate proficiency: Rails | Javascript | Java | C | ORM | Unit testing | Functional testing | Git | C# | HTML/CSS

Familiar: Agile | Angular | React

AWARDS

- IEEE ML and Applications Research Paper
- CSUN AI Jam – Summer Accelerator program offer ($15,000 total group comp) Presentation 2019
- Best Science Poster : SMC Global Citizenship ($1000 group prize) 2016

PARTICIPATION

- Mentor to 10 CSUN Students via Mentor Collective 2022
- Raspberry Pi/Pico Hobby Projects 2022
- Hackathon : Intelligent Systems for Molecular Biology 2021
- CSUN Accessability Hackathon 2018
- Independent Study: Built Hand Powered Centrifuge with Partner 2016