

DAVID WARD

Software Engineer

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📍 Los Angeles, California

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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 functionality to controllers and views with integration testing
- Methodically debugged front end JavaScript controllers, CSS issues, and video processing job sidekick worker tasks
- Utilized scopes to filter data based on business logic
- Chose architecture for tagging feature including researching and implementing various frameworks
- Created dynamic UIs using Stimulus.js and Hotwire

PROJECTS

Protein Domain Annotations Database SPA (CSUN Lab Volunteer)

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
- Front end uses \$HTTP service calls, *ngFor/*ngIf/*ngTemplate directives, and custom components to dynamically display data
- 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 Volunteer)

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
- Refactored 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 Accessibility **Hackathon** 2018
- Independent Study: Built Hand Powered Centrifuge with Partner 2016