David Ward

✉ DavidMacotoWard@gmail.com | 🐙 github.com/DavidMakoto | in linkedin.com/in/DavidMacotoWard

Work Experience

Houlihan Lokey   *Hybrid / Los Angeles*
Software Developer   *Jun 2023 - Present*
- Automated repetitive administrative tasks, saving around 2-3 hours per day across multiple teams through modifying email/MS Teams groups
- Rewrote a critical legacy database cleanup console app using CQRS and CLEAN, enabling unit testing and eliminating deep-rooted bugs
- Automated archival of expired deals, outdated email groups/MS Teams, and employee offboarding with email notifications and JAMS jobs
- Improved maintainability and enabled unit testing by refactoring heavily used, chained CQRS handlers into services
- Introduced automated functional testing via Postman to department, increasing number of tests run 15 fold within QA budget for common workflows, expediting bug identification and resolution for inconsistent errors in MS Graph API-driven communication management apps
- **Technical skills:** C#, ASP.NET Core, Angular, Typescript, Automated Branch Testing, Mocking, Postman, CI/CD, Azure, TSQL, DataGrips, Rider

Layers Media   *Remote / United States*
Full Stack Web Developer   *Jul 2022 - Dec 2022*
- Solely responsible for developing a monolithic social media app, collaborating directly with CEO and CTO
- Enabled rapid startup launch by independently resolving 27 bugs and implementing feature updates across the entire web app
- Ensured zero bugs in production by writing an exhaustive 66 unit tests and 131 integration tests in the automated test suite
- Accelerated development time by resolving deep test suite bug affecting 4-6% tests due to data generation library sample size constraints
- **Technical skills:** Ruby on Rails, Stimulus.js, CSS, Flexbox, Automated Testing, CI/CD, Docker, AWS, PostgreSQL, Debugging, Git, MVC

Projects

Tweetir   *Los Angeles, CA*
Personal project   *Jan 2022 - Aug 2022*
- Text-based blog incorporating industry-standard practices: user authentication, data validation, unit testing, and functional testing
- **Technical skills:** Ruby on Rails, PostgreSQL, HTML/CSS, Heroku, GitHub Workflows, CI pipeline, Cloud staging server

Protein Domain Annotations Searchable Database SPA   *Northridge, CA*
Structural Bioinformatics Lab   *Feb 2022 - Apr 2022*
- Built open-source structural bioinformatics tool compiling protein data from multiple sources, enabling novel analysis
- Developed user interface in Angular and RESTful API backend in C with Entity Framework ORM, including type checking
- Implemented frontend features: $HTTP service calls, two-way data binding, *ngFor/*ngIf/*ngTemplate, custom components
- MVC architecture uses separation of concerns for scalable development with frontend hosted on Apache server and backend/database on Azure
- **Technical skills:** Typescript with Angular, C# with Entity Framework Core, AzureSQL, Postman, Apache2

California Wildfire Prediction using Machine Learning   *Northridge, CA*
Senior Design Group Project   *Aug 2020 - Dec 2021*
- Predicted fires in CA counties with 93% accuracy using machine learning on raw geospatial data
- Co-led initiative boosting spatial analysis accuracy 60x and ensuring data integrity via automated workflow to subset data using image masking
- Visualized spatio-temporal fire records via interactive D3.js map app, precisely plotting fires on CA county boundaries using GeoJSON data
- **Technical Skills:** Python, NumPy, Pandas, GDAL, Rasterio, Javascript, D3.js, HTML/CSS, Git

Education

California State University, Northridge   *Northridge, CA*
B.S. Computer science   *Aug 2018 - Dec 2021*
- Spearheaded two structural bioinformatics research projects and a paid research on data center workload balancing algorithm analysis

Publications

CONFERENCE PROCEEDINGS

California Wildfire Prediction using Machine Learning
  Kaylee Pham, David Ward, Saulo Rubio, David Shin, Lior Zlotikman, Sergio Ramirez, Tyler Poplawski, Xunfei Jiang
  2022 21st IEEE International Conference on Machine Learning and Applications (ICMLA), 2022

Technical Skills

C# (EF Core), Ruby (Rails), Javascript (Typescript, Angluar, React, Stimulus, D3), Python (Pandas, NumPy, PyCUDA, GDAL), C++ (CUDA), Databases (MySQL, PostgreSQL, TSQL, AzureSQL), Automated Testing (unit, functional), DevOps (CI/CD, Docker, Heroku, AWS, Azure), CSS (Tailwind, Flexbox)