

Maxwell Reynolds

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EDUCATION:

University of Pittsburgh School of Medicine (2020-present)

- Biomedical Informatics PhD
- Funded by Dean's Fellowship (2020-2021) and National Library of Medicine biomedical informatics training grant

CU Boulder College of Engineering (2018-2020)

- Major: Applied Computer Science B.S.
- GPA: 3.9
- Coursework in discrete structures, algorithms, data structures, software development, computer systems, data science, information visualization, databases

UCLA College of Letters and Sciences (2014-2018)

- Major: Biology B.S.
- GPA: 3.8

RESEARCH EXPERIENCE:

Researcher- Batman Lab University of Pittsburgh (January 2021-Present)

- Research on Alzheimer's disease, neuroimaging, genomics
- Application of machine learning, causal inference, Bayesian statistics methods
- Current project: using Bayesian hierarchical modeling to harmonize brain MRI data

Researcher- Nguyen Cardiology Lab VA Greater Los Angeles (September 2016-August 2018)

- Performed strain tracings using heart ultrasound (echocardiography)
- Assisted with data collection for the examination of strain and strain rate in HIV patients and a study of the reliability of cardiac strain measurements
- Wrote a manuscript regarding the reliability of cardiac strain measurements among novice observers (second author), submitted for peer review.

LEADERSHIP EXPERIENCE/WORK EXPERIENCE:

Software Engineer– Palo Alto Health Sciences (January 2020-August 2020)

- Led Salesforce Health Cloud integration for the company including designing the data architecture, wrote backend logic, and built Lightning Web Components and Visualforce pages
- Completed full-stack development projects for clinical data website
- Built an internal payment app to facilitate patient billing using REST and SOAP APIs

Software Engineer (Internship) – Palo Alto Health Sciences (May 2019-December 2019)

- Worked on full-stack development and SQL database changes for internal clinical data analysis website using PHP, SQL, HTML, and other tools
- Created test automation scripts to accelerate manufacturing process for medical devices used to treat panic disorder and PTSD
- Assisted in device R&D with mechanical, electrical, and manufacturing engineering teams

Emergency Medical Technician/Field Training Officer- UCLA EMS (June 2015-September 2018)

- Responded in ambulance to 911 calls on UCLA campus and in surrounding Westwood area
- Assessed, treated, and transported patients to emergency room

- Administered simulations and worked shifts with trainee EMT's, evaluated their progress, and helped them improve EMT skills and knowledge
- Served on the Spring 2016 Hiring Board
- Fall 2016 EMT of the quarter

Volunteer Program Director - Youth Movement Against Alzheimer's (August 2015-December 2017)

- Started the YMAA TimeOut@UCLA Intergenerational Volunteer Program which pairs Alzheimer's patients with UCLA students for 3-hour sessions every week
- Created activity agendas and led activities in first quarter of program (Winter 2016)
- Led student volunteer recruitment efforts, student coordinator recruitment, and worked with advisors from UCLA Alzheimer's and Dementia Care Program to pair students with Alzheimer's patients

Genetics Undergraduate Learning Assistant (September 2017-December 2017)

- Assisted students in genetics class (Life Sciences 4)
- Held weekly office hours for undergraduate students
- Helped facilitate and led discussion sections and exam review sessions

PROGRAMMING PROJECTS:

SongSorter

- Built a web application to sort a user's library into playlists based on song genres.
- Used Flask framework for Python
- Hosting website on a Linux server
- Available for use at songsorter.com

Maze Solver

- A program that solves user-uploaded mazes using Dijkstra's algorithm
- Built with OpenCV and Streamlit, hosted [here](#)

ICU Mortality Prediction

- Created a predictive classification model using logistic regression and nearest-neighbors techniques for intensive care unit in-hospital mortality
- Used Python (StatsModels, Scikit-Learn, Pandas, Matplotlib)
- Implemented model with a hospital database (MySQL) and user interface

Macroevolutionary Analysis of Viper Snakes

- Analyzed biodiversity and evolutionary trends using R and Biodiverse
- Cleaned species occurrence dataset for geospatial and physiological trait analysis
- Performed statistical tests including Faith's phylogenetic diversity, Bayesian Analysis of Macroevolutionary Mixtures, phylogenetic independent contrasts, FiSSE

AWARDS AND HONORS:

UCLA

- Dean's List, Cum Laude

Los Gatos High School

- Los Gatos Kiwanis Club Scholarship

ADDITIONAL SKILLS:

- Probabilistic Programming (Pyro/NumPyro)
- Programming experience with Python (Pandas, NumPy, SciPy, etc.), SQL, PHP, Apex, Visualforce, C++, HTML