

Maxwell Reynolds

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EDUCATION

University of Pittsburgh <i>PhD Student in Biomedical Informatics</i> GPA: 4.0, advisor Kayhan Batmanghelich	<i>Aug 2020-Present</i> Pittsburgh, PA
University of Colorado <i>B.S. Applied Computer Science</i> GPA: 3.9	<i>Aug 2018-May 2020</i> Boulder, CO
University of California, Los Angeles <i>B.S. Biology</i> GPA: 3.8	<i>Sep 2014-June 2018</i> Los Angeles, CA

RESEARCH EXPERIENCE

PhD Student Researcher <i>Batman Lab – University of Pittsburgh</i> I research methods to analyze structural brain images using deep learning and Bayesian inference. My first project involved developing a hierarchical model for harmonization of neuroimaging data from multiple different scanners. I am currently working on developing longitudinal self-supervised learning approaches to improve disease classification and prediction from brain images.	<i>Jan 2021-Present</i> Pittsburgh, PA
Undergraduate Researcher <i>Nguyen Lab- VA Greater Los Angeles</i> I performed strain tracings using heart ultrasound (echocardiography), collected data for examination of strain and strain rate in HIV patients, and wrote a manuscript on the reliability of cardiac strain measurements.	<i>Sep 2016-Aug 2018</i> Los Angeles, CA

PROFESSIONAL EXPERIENCE

Software Engineer <i>Palo Alto Health Sciences (now Freespira)</i> <ul style="list-style-type: none">- Led Salesforce Health Cloud integration for the company. This included designing the data architecture, writing backend code, and building Lightning Web Components and Visualforce pages- Full-stack development projects for clinical data website- Built an internal payment app to facilitate patient billing using REST and SOAP APIs	<i>Jan 2020-Aug 2020</i> Seattle, WA
Software Engineer Intern <i>Palo Alto Health Sciences (now Freespira)</i> <ul style="list-style-type: none">- Worked on full-stack development and SQL database changes for internal clinical data analysis website using PHP, SQL, HTML, and other tools	<i>May 2019-Dec 2019</i> Seattle, WA

- 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 Emergency Medical Services

June 2015-Sep 2018

Los Angeles, CA

- Responded in ambulance to 911 calls in West Los Angeles area
- Assessed, treated, and transported patients to emergency room
- Administered simulations and worked with trainee EMT's, evaluated their progress, and helped them improve EMT skills and knowledge
- Served on the Hiring Board

Youth Movement Against Alzheimer's

Volunteer Program Director

Aug 2015-Dec 2017

Los Angeles, CA

- 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
- Led student volunteer recruitment efforts, coordinator recruitment, and worked with advisors from UCLA Alzheimer's and Dementia Care Program to pair students with Alzheimer's patients

PUBLICATIONS

Reynolds, M., Chaudhary, T., Torbati, M.E., Dana, L., 2022. ComBat Harmonization : Empirical Bayes versus Fully Bayes Approaches. *bioRxiv* 1–40.
<https://doi.org/10.1101/2022.07.13.499561>

Xu, Y., Xie, S., **Reynolds, M.,** Ragoza, M., Gong, M., Batmanghelich, K., 2022. Adversarial Consistency for Single Domain Generalization in Medical Image Segmentation. *MICCAI*.
<https://doi.org/10.48550/arXiv.2206.13737>

TECHNICAL SKILLS

Languages: Python, R, SQL, PHP, Apex, Visualforce, HTML
Softwares: Pytorch, Pyro, MONAI, Freesurfer, ANTS

PROGRAMMING SIDE PROJECTS

SongSorter

- Web app to sort a user's library into playlists based on song genres
- Built with Python/Flask, hosted on Linux server
- Available at songsorter.com

MazeSolver

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