

# Davina ZAMANZADEH

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## EDUCATION

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### University of California, Los Angeles

MSc (S21) | PhD (IP) - COMPUTER SCIENCE      GPA: **4.0/4.0**      SEPT 2018 - PRESENT

- Research in **eHealth and Machine Learning** with Drs. M. Sarrafzadeh & A. Bui.
- *Master's thesis*: autoencoders for imputation on large clinical datasets.
- *Relevant coursework*: ML, ML Theory, Probabilistic Graphical Models, Automated Reasoning, Probabilistic Programming and Relational Learning, Web Information Management, Natural Language Processing (NLP)

### University of California, Santa Barbara

BSc - COMPUTER SCIENCE      GPA: **3.93/4.0**      SEPT 2014 - JUNE 2018

- **Ranked #1** in graduating class with Distinction in Major.
- *Relevant courses*: AI/ML, Networking, Security, Computer Vision, Distributed Systems

## RESEARCH

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### eHealth Research Lab, UCLA

SEPT 2018 - PRESENT

- CRRT: Developing a system to predict if a patient with late-stage kidney disease will benefit from a gentler form of dialysis; collaboration with UCLA Health and Cedars Sinai.
- CURE-CKD: Developing novel imputation techniques to assist with prediction tasks regarding patients with Chronic Kidney Disease (CKD); collaboration with UCLA Health CURE-CKD Team.
- Project REFOCUS: Constructing a racism-aware COVID-19 surveillance system to address health inequities; collaboration with UCLA School of Public Health and the CDC.
- Established a collaboration with Translational Genomics Group at Cedars Sinai to build a model to predict whether a Crohn's Disease patient will experience post-operative recurrence.

### Programming Languages Lab, UCSB

JAN 2017 - JUNE 2018

- Investigated effective comparison metrics for test sets/fuzzers under Dr. Ben Hardekopf.

## WORK EXPERIENCE

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### Data Science Intern at Microsoft, Remote

JUNE 2021 - SEPT 2021

**Best In-House Image DNN:** Developed a semi-novel knowledge distillation technique for deep neural networks (DNN) in a multi-teacher setting to produce universal image embeddings that will generalize well across tasks and boost performance beyond the teachers.

- Researched and implemented methods to save memory and speed up training, allowing us to increase the batch-size from 2 to 64 for 2 teachers resulting in roughly a 3x speedup.
- Wrote end-to-end executable code that unifies the data preprocessing and model loading pipeline across various tasks such that it can be easily extended to different datasets/teachers.

*Technologies:* python, tensorflow, keras

Machine Learning Intern at **Pinterest Labs**, *Remote*

JUNE 2020 - SEPT 2020

**Query Recommendations:** Built a gradient boosted decision tree to improve query recommendations to improve user engagement and experience.

- 156k increase in daily searches (3.09%), and sustained lift in product usage past week 1 of the experiment. Ran A/B testing experiments to measure product impact.
  - Worked on the end-to-end machine learning pipeline (collect training data, assign labels, create features, train, evaluate, and deploy), and built workflow for hyperparameter tuning.
- Technologies:* python, java, scala, hadoop, SQL

## PUBLICATIONS

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1. **D. Zamanzadeh**, P. Petousis, T. Davis, S. Nicholas, K. Norris, K. Tuttle on behalf of the CURE-CKD Study team, A. Bui, M. Sarrafzadeh. *Autopopulus: A Novel Framework for Autoencoder Imputation on Large Clinical Datasets*. IEEE Engineering in Medicine and Biology Conference (EMBC) 2021.
2. S. Fazeli, **D. Zamanzadeh**, A. Ovalle, T. Nguyen, G. Gee, M. Sarrafzadeh. *COVID-19 and Big Data: Multi-faceted Analysis for Spatio-temporal Understanding of the Pandemic with Social Media Conversations*. arXiv preprint arXiv:2104.10807 2021.
3. M. Gavrilov, K. Dewey, A. Groce, **D. Zamanzadeh**, B. Hardekopf. *A Practical, Principled Measure of Fuzzer Appeal: A Preliminary Study*. IEEE International Conference on Software Quality, Reliability, and Security (QRS) 2020.
4. A. Hosseini, **D. Zamanzadeh**, L. Valencia, R. Habre, A. Bui, M. Sarrafzadeh: *Domain Adaptation in Children Activity Recognition*. IEEE Engineering in Medicine and Biology Conference (EMBC) 2019.

## ACTIVITIES AND AWARDS

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2020 -	<b>AMIA Podcast Social Media Ambassador:</b> In charge of creating
PRESENT	content and managing Twitter for For Your Informatics (@FYInformatics).
2018 & 2019	<b>Graduate Dean's Scholar Award:</b> Departmental award given to highly recruited students who are deemed to enhance UCLA's competitiveness.
OCT 2017	<b>Grace Hopper Celebration Scholarship:</b> Received one of few awards from the Computer Science department at UCSB to attend GHC.
SUMMER 2017	<b>KPCB Fellow and Decision Committee:</b> Selected to participate in networking events with technical leaders in Silicon Valley. Served on the Decision Committee for potential 2018 Fellows.
SPRING 2016 -	<b>Phi Sigma Rho Chapter Founder/Director of Design:</b>
SPRING 2018	Established the UCSB chapter of Phi Sigma Rho, a national sorority for women in STEM, as part of the founding class. In charge of designs, and involved in planning events, writing bylaws, recruiting, and mentorship.
FALL 2014 -	<b>SB Hacks Organizer:</b> Planning/running a large-scale hackathon at
SPRING 2018	UCSB every year: involved in logistics (venue, food, etc), design, and getting sponsors.