Fahad Kamran

Curriculum Vitae
Computer Science PhD Candidate

PERSONAL DETAILS

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EDUCATION

PhD in Computer Science 2018-Present
University of Michigan

- ◇ Third year PhD Candidate
- ◇ Advisor: Professor Jenna Wiens
- ◇ Research focus: Intersection of machine learning and healthcare
- ◇ Specific research topics: Causal inference, survival analysis, wearable sensors, leveraging electronic health record data, sports analytics

Bachelors Degree 2014-2018
University of California, Berkeley

- ◇ Graduated with degrees in Mathematics, Statistics, and Computer Science
- ◇ Final cumulative GPA: 3.80

High School Diploma 2010-2014
Centerville High School

- ◇ Graduated from Centerville High School with an Honors Diploma
- ◇ Completed high school as a National AP Scholar

WORK EXPERIENCE

Graduate Student Research Assistant 2018-
University of Michigan CSE Department

- ◇ Advised by Professor Jenna Wiens
- ◇ Main research focuses include adapting recent advancements in the field of machine learning and representation learning to build novel algorithms in causal inference and survival analysis
- ◇ Other areas of interest include: leveraging data from large-scale electronic health records, sports analytics, and combining data obtained from wearable sensors with machine learning in order to detect and prevent physiological harm

Undergraduate Deep Learning Research 2015-2018
UC Berkeley EECS Department

- ◇ Worked with Yusuf Bugra Erol and Pulkit Agarwal on applying deep learning techniques to physiological time-series data
- ◇ Entered the PhysioNet CinC Challenges for 2016 and 2017 and worked with using convolutional neural networks and recurrent neural networks to classify heartbeats as either normal or abnormal

◇ Used state of the art audio architectures (*e.g.* Wavenet) on EKG data in order to build useful representations for downstream classification

Data Analyst Intern 2017
84.51°

◇ Interned at a data analytics firm, doing work for the parent company Kroger/Ralphs.
◇ Read in large amounts of customer purchasing behavior and applied various machine learning algorithms to learn the most important customer traits
◇ Used these customer traits to determine what sort of coupon offers should be sent to specific customers
◇ Introduced natural language processing (NLP) to the company by creating an introductory guide to NLP, a python tutorial teaching the most important libraries for language analysis, and implemented a script to read in comments from online sources and learn overall customer sentiment

TEACHING EXPERIENCE

Graduate Student Instructor 2019
Introduction to Artificial Intelligence, University of Michigan

◇ Part of a 4 person course staff
◇ Main responsibilities included preparing for and leading discussion sections, creating homework assignments, and reviewing and grading exams
◇ In charge of communicating with course graders and monitoring and answering questions on the course forum
◇ Gave two lectures to the full course on the topics of game theory and search algorithms

Big Data Summer Institute Lecturer 2019
School of Public Health, University of Michigan

◇ Instructed a group of public health undergraduates through a self-made Python tutorial as part of the Big Data Summer Institute at the University of Michigan

Course Instructor 2018
Foundations of Data Science, UC Berkeley

◇ Co-instructed a university course for roughly 250 students in a summer session
◇ Main responsibilities included preparing for and leading lecture, organizing staff, creating worksheets, assignments, exams, and dealing with day to day infrastructure and logistics to keep the course running
◇ Created student projects from scratch to best grow the course into an ideal learning experience for students

Head Teaching Assistant 2016-2018
Foundations of Data Science,UC Berkeley

◇ Spent four semesters as one of the head TAs
◇ Main responsibilities included teaching sections and holding office hours
◇ Additional tasks I took included organizing course staff, creating the website, organizing tutoring, and creating large portions of the curriculum
◇ Currently handling and automating the grading process

Teaching Assistant 2016
Introduction to Artificial Intelligence, UC Berkeley

◇ Was part of a small, 6 person course staff teaching the course over the summer
◇ On top of discussions and office hours, I created and edited discussion worksheets and held periodic course reviews

Teaching Assistant 2017

Data Structures and Algorithms, UC Berkeley

- ◇ TA'd for the second introductory computer science course when roughly 1500 students were enrolled
- ◇ Along with basic duties, I organized tutoring sections and dealt with all grading compilation and regrade requests
- ◇ Co-taught one lecture during the semester

Machine Learning Lecturer 2017

Practical Data Science Skills for Internships, UC Berkeley

- ◇ Designed my own curriculum and taught the machine learning portion of a student created course
- ◇ My lectures introduced common machine learning algorithms and their applications and implementations in industry

EXTRACURRICULARS

Relations Chair 2019-2021

Computer Science and Engineering Graduate Student Organization, University of Michigan

- ◇ Member of the board of the organization overseeing all computer science graduate students
- ◇ Contribute to large scale decisions regarding community building and diversity, equity, and inclusion among computer science graduate students
- ◇ Currently act as liaison between faculty and graduate students by attending faculty meetings and relaying graduate student experiences
- ◇ Past responsibilities included organizing, hosting, and planning weekly social hours for graduate students to provide relaxation and stress relief

Founder 2020

CSEG Wellness, University of Michigan

- ◇ Founder and leader of an organization to provide peer-to-peer support to graduate students in need in computer science
- ◇ Host events and programs to promote wellness awareness and provide opportunities for students to engage with the graduate student community

President 2016-2017

Computer Science Mentors, UC Berkeley

- ◇ President of an organization that was devoted to easing the rigor of introductory computer science courses for students new to the field
- ◇ Created close ties with the computer science department, introduced mentoring for a new course, and began sections aimed towards specific groups of students who were having an especially difficult time transitioning, including underrepresented groups in computer science

Peer Advisor 2016-2017

UC Berkeley Mathematics Department

- ◇ Held office hours weekly to provide an outlet for students who were considering majoring in mathematics
- ◇ Held mass advising sessions where I would lead discussions on the courses that were occurring in the next semester

PUBLICATIONS

[1] Caleb Belth, **Fahad Kamran**, Donna Tjandra, and Danai Koutra. "When to Remember Where You Came from: Node Representation Learning in Higher-order Networks." *Proceedings of the 2019 IEE/ACM International Conference on Advances in Social Networks Analysis and Mining*. 2019.

[2] Karandeep Singh, Thomas valley, Shengpu Tang, Benjamin Li, **Fahad Kamran**, Michael Sjoding, Jenna Wiens et al. "Validating a Widely Implemented Deterioration Index among Hospitalized COVID-19 Patients." *medRxiv*. 2020.

[3] **Fahad Kamran** and Jenna Wiens. "Estimating Calibrated Individualized Survival Curves with Deep Learning." *35th AAAI Conference on Artificial Intelligence*. 2021.

AWARDS

[1] Computer Science Outstanding Teaching and Leadership Award. University of California, Berkeley, 2018.

[2] Campus Outstanding GSI Award, University of California, Berkeley, 2019.

[3] Computer Science and Engineering Service Award for Excellence in Climate, Diversity, Equity, and Inclusion. University of Michigan. 2020.