

Lizzie Kumar

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iekumar.com

EDUCATION

University of Utah Ph.D. Computing, 3.8/4.0	2019— <i>Salt Lake City, UT</i>
University of Massachusetts M.S. Computer Science, 3.8/4.0	2019 <i>Amherst, MA</i>
Scripps College B.A. Mathematics (honors), 10.8/12.0	2016 <i>Claremont, CA</i>

HONORS & AWARDS

Noel de Nevers Memorial Fellowship, ARCS Foundation Utah	2019-2020
Lind Family Prize in Mathematics, Scripps College	2015, 2016
James E. Scripps Scholarship, Scripps College	2012-2016
Finalist, National Merit Scholarship	2012

RESEARCH EXPERIENCE

Graduate Research Assistant <i>University of Utah</i>	2020— <i>Salt Lake City, UT</i>
· Researching methods to analyze machine learning decision systems deployed in areas of high social impact, advised by Suresh Venkatasubramanian	

PUBLICATIONS

- Shapley Residuals: Quantifying the limits of the Shapley value for explanations.
I. Elizabeth Kumar, Carlos Scheidegger, Suresh Venkatasubramanian, and Sorelle Friedler.
Presented at the *ICML Workshop on Human Interpretability in Machine Learning (WHI)*, 2020.
- Problems with Shapley-value-based explanations as feature importance measures.
I. Elizabeth Kumar, Suresh Venkatasubramanian, Carlos Scheidegger, and Sorelle Friedler.
In *Proceedings of the 37th International Conference on Machine Learning (ICML)*, 2020.

INDUSTRY EXPERIENCE

Junior Data Scientist <i>MassMutual</i>	2016-2019 <i>Amherst, MA</i>
· Wrangled/analyzed data and developed machine learning models for the pricing and valuation of disability insurance and pension plans	
· Supported codebases for data ingestion and model evaluation using R, Python, and SQL	
· Implemented explanation systems for transparency into black-box underwriting models	
· Fully funded for graduate coursework at UMass through the Data Science Development Program	

TEACHING EXPERIENCE

Graduate Teaching Assistant

University of Utah

2020—
Salt Lake City, UT

- Teaching Mentor for Undergraduate Algorithms

Undergraduate Teaching Assistant

Scripps College

2013-2016
Claremont, CA

- Mentored Scripps students in any math class twice a week at the walk-in tutoring center
- Graded for Precalculus, Calculus I, Differential Equations, and Number Theory

Drawing Instructor

Deerfield Academy

Summer 2014
Deerfield, MA

- Planned and led classes in drawing and other art activities for adolescent campers

SERVICE & OUTREACH

Data Visualization Mentor, Five College Datafest

2018, 2019

Beta reader, O'Reilly Machine Learning with Python Cookbook

2017

TECHNICAL STRENGTHS

Programming Languages

R, Python, SQL

Imaging / Typesetting

LaTeX, Photoshop, Illustrator