Aparajithan Venkateswaran

apara.vnkat@gmail.com • aparavenkat.com • github.com/AparaV • twitter.com/apara_v

Education

University of Washington, Department of Statistics 2024 (expected)

Ph.D. in Statistics. Advisors: Tyler H. McCormick & Emilija Perković.

University of Washington, Department of Statistics 2022

M.S. in Statistics.

University of Colorado Boulder, College of Engineering 2020

B.S. in Applied Mathematics, *summa cum laude* with Honors.
B.S. in Computer Science, *summa cum laude* with Honors. Advisor: Daniel B. Larremore.
Senior Thesis:
"Understanding SpringRank through Random Utility Models, Identifiability and Online Updates"

Research Experience

University of Washington 2021-present

Causal Discovery: Adding expert knowledge to causal graphs.
Rashomon Effect: Enumerating near-optimal models to robustly estimate heterogeneity.
Multi-armed Bandits: Mortal multi-armed bandits to efficiently perform contact tracing.

University of Colorado Boulder 2017-2020

COVID-19 Response: OSS to monitor anonymized social densities on campus.
Complex Networks: Rank embeddings, identifiability of node covariates, online ranking.
Resume Parsing: Machine learning and stochastic models to segment and parse curricula vitae.
Feature Tracking: Optical navigation using deep learning.

Teaching Experience

University of Washington 2020-2023
Teaching Assistant

Winter 2023: Stochastic Modeling II (STAT 517).
Winter 2022: Statistics for Social Sciences (STAT 221).
Autumn 2021: Statistical Inference I (STAT 512).
Spring 2021: Introduction to Statistical Learning (STAT 435).
Winter 2021: Elements of Statistical Methods (STAT 311).
Autumn 2020: Statistical Reasoning (STAT 220).

University of Colorado Boulder 2018-2020
Teaching Assistant

Spring 2020: Chaotic Dynamics (CSCI 4446/5446).
Spring 2018: Discrete Structures (CSCI 2824).

Industry Experience

Microsoft 2019-2022
Data Science Intern

Summer 2023: Xbox Player Services Team.
Summer 2022: Xbox Player Services Team.

Software Engineering Intern

Summer 2021: Mixed Reality Object Understanding Team.
Summer 2020: Mixed Reality Cloud SDK Team.
Summer 2019: Edge Experimentation Team.

Talks and Presentations

"Feasible contact tracing." (Invited) Mar 2024
Epidemiology and Biostatistics Seminar [University of Illinois Chicago]

"Rashomon Pooling Sets for Heterogeneity." Jan 2024
Statistics Winter Workshop on Casual Inference and its Applications [University of Florida]

"Leveraging heterogeneity in infectivity to improve contact tracing." Aug 2022
Joint Statistical Meetings [Washington D.C.]

"Efficient contact tracing" Nov 2021
Data Science Methods for Policy Evaluation [Johns Hopkins University]

Peer-Reviewed Publications

1. T. Tran, J. M. Steiner, **A. Venkateswaran**,[1] and J. Buber, "Peak oxygen consumption by smartwatches compared with cardiopulmonary exercise test in complex congenital heart disease," *Heart* p. heartjnl-2023-322989, (2023). doi: 10.1136/heartjnl-2023-322989.

Other Publications

2. **A. Venkateswaran**, "Understanding SpringRank through Random Utility Models, Identifiability and Online Updates", *University of Colorado Boulder* (2020).
3. **A. Venkateswaran**, B. Palmer, and J. Kailey-Steiner, "The Value of Identity: Measure the Cost of Privacy", *Colorado Journal of Applied Mathematics* pp. 1-22, (2018).

Preprints and Working Manuscripts

4. **A. Venkateswaran**, J. Das, T. H. McCormick, "Feasible contact tracing", https://arxiv.org/abs/2312.05718 (2023).

[1] Consulting statistician

Awards

Outstanding Undergraduate for Academic Achievement [CU Boulder]	2020
Chancellor's Recognition Award [CU Boulder]	2020
Active Learning Award [CU Boulder]	2020
Computer Science Discovery Learning and Service Learning Award [CU Boulder]	2020
Colorado Mathematics Award [State of Colorado]	2019
INFORMS Award, Outstanding Winner [Mathematical Contest in Modeling]	2019
Wozniak Scholarship [CU Boulder]	2018, 2019
Meritorious Winner [Mathematical Contest in Modeling]	2018
O'Kelly Scholarship [CU Boulder]	2017

Service

Statistics Directed Reading Program [UW]	2021-present
Pre-Application Review Service [UW]	2021-2023
Graduate Student Representative [UW]	2022-2023
Statistics Drop-in Tutor [UW]	2020-2021
HackCU [CU Boulder]	2016-2020
GitHub Campus Expert [CU Boulder]	2017-2020
Computer Science Department Action Team [CU Boulder]	2019