

# Srikar Katta

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## EDUCATION

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### Duke University

*PhD, Computer Science*

*Advisors: Cynthia Rudin, Alexander Volfovsky*

Durham, NC

*August 2022 – Current*

*GPA: 3.9/4.00*

### Temple University

*BS, Mathematics & Computer Science*

*Minors in Economics & Statistics*

Philadelphia, PA

*August 2018 – May 2022*

*GPA: 3.96/4.00*

## SKILLS

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**Languages/Tools:** Python, R, SQL, Git/GitHub, Java, C, Tableau, Google Data Studio

**Methodologies:** Causal inference, Machine learning, Econometrics, Network analysis

**Libraries:** Tidyverse, R Shiny, iGraph, pandas, numpy, seaborn, matplotlib, plotly, sklearn

## PAPERS

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- Donnelly J\*, **Katta S\***, Rudin, C. Browne, E. The Rashomon Importance Distribution: Getting RID of Unstable, Single Model-based Variable Importance. **NeurIPS 2023. Spotlight Paper** (Top 3% of submissions).
- **Katta S**, Parikh, H, Rudin, C, Volfovsky, A. Interpretable Causal Inference for Analyzing Wearable Device and Sensor Data. Submitted to AISTATS. **Presented at JSM 2023, INFORMS QSR 2023, INFORMS 2023.**
- **Katta S**, Parikh H, Rudin C, Volfovsky A, Sun H, Westover B. Estimating the Brain's Inherent Age From Sleep-Based EEG Scans. In progress. **1st Place, AAAI W3PHIAI 2023 Hackathon on Aging.**
- **Katta S**, Obradovic Z, Airoidi E. Preferential Attachment with Duplication: A Mechanistic Network Model for Generating non-Scale-free, Heavy-Tailed Networks. In Progress.
- Hackett K, Yi J, **Katta S**, Giovannetti T, Jarcho J, Fareri F, Smith DV. Interactions Between Risk Factors for Financial Exploitation: Sociodemographics, Health, and Psychosocial Functions. In progress. **Presented at International Neuropsychological Society 2021 and Society for Neuroeconomics 2021**

## TECHNICAL EXPERIENCE

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### Disney+ and ESPN+, Disney

*Data Science Intern*

New York, NY (Remote due to COVID-19)

*May 2021 – August 2021*

- Developed python package for evaluating supervised model performance across heterogeneous subpopulations
- Improved models predicting user churn, subscription propensity, and premier-access movie upsells by up to 10%
- Designed cross-platform recommender system, winning an honorable mention in internal datathon

### Dyson, Inc

*People Data Science Intern*

Chicago, IL (Remote due to COVID-19)

*June 2020 – August 2020*

- Predicted COVID-19 cases using machine learning methods with 6.5% error rate to guide store reopenings
- Operationalized organizational chart development using R Shiny, saving \$25,000+ of work annually
- Automated HRIS data auditing using Python and developed Tableau dashboards, saving \$250,000+ annually
- Collaborated with non-technical HR team to conduct global gender pay analysis to restructure compensation plans

### Bureau of Labor Statistics

*Intern*

Philadelphia, PA

*January 2019 – May 2019*

- Analyzed Bureau of Labor Statistics and Census Bureau datasets using R, including collection methods and usage
- Researched correlates of immigrant income gap in US states to inform immigration and labor policy

## RESEARCH EXPERIENCE

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### Duke Almost Matching Exactly Lab

*Drs. Cynthia Rudin, Alexander Volfovsky*

Durham, NC

*August 2022 – Current*

- Developed anomaly detection and age estimation framework, boosting disease classification accuracy by 11%
- Created new pipeline for uncertainty quantification for variable importance while guaranteeing stability, improving the variable importance reproducibility by over 25%
- Developed interpretable causal inference method for analyzing wearable device data, outperforming existing baselines in estimating heterogeneous treatment effects by over 300%

### Temple Data Science Institute

*Drs. Edoardo Airoldi, Zoran Obradovic, Ken McAlinn, Jeanne Ruane*

Philadelphia, PA

*August 2020 – August 2022*

- Devised network algorithm that produces more realistic networks 77% of the time than existing methods
- Automated topic and network modeling analyses for 600,000+ tweets, saving 60% in reporting time
- Developed data science textbook covering estimation strategies and probabilistic models with applications in R

### Temple Neuroeconomics Lab

*Dr. David V Smith*

Philadelphia, PA

*August 2018 – August 2022*

- Raised \$6,000 to study the relationships between prosocial behavior and social cues using web data
- Researched decision making and financial scam susceptibility using field surveys ( $N = 3000$ ) and lab experiments
- Trained 6 research assistants to wrangle and visualize data in R by creating and implementing 12 lesson plans

### Federal Reserve Bank of Philadelphia

*Research Intern*

Philadelphia, PA

*May 2019 – May 2020*

- Used regression techniques to compare business' and professional forecasters' inflation expectations
- Advised policy by surveying 8,000+ local businesses on perspectives of economy and inflation levels
- Created surveys and analyzed and visualized data for 16 press releases; work cited by CNN, Reuters, and WSJ

## AWARDS & HONORS

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**1<sup>st</sup> Place Aging Hackathon**, AAAI W3PHIAI (\$1,000)

**Scott Hibbs Future of Computing Award**, Temple University (\$600)

**CARAS Grant**, Temple University (\$4,000)

**Provost Scholarship**, Temple University, (\$40,000)

**Dean's List**, Temple University

**Notable Mention**, Disney Streaming Service Datathon

**LAURA Grant**, Temple University (\$2,000)

February 2023 – February 2023

May 2022 – May 2022

May 2021 – December 2021

August 2018 – August 2022

August 2018 – August 2022

June 2021 – June 2021

August 2019 – January 2020

## TEACHING EXPERIENCE

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### Teaching Assistant

*CPS 590: Data Science*

January 2023 – Current

*Duke University*

### Teaching Assistant

*STAT 3503/8109: Applied Statistics and Data Science*

August 2021 – December 2021

*Temple University*

### Teaching Assistant

*MATH 1031: Elements of Statistics/Data Science*

August 2020 – December 2020

*Temple University*

### Teaching Assistant

*CIS 1051: Introduction to Programming in Python*

January 2020 – May 2020

*Temple University*

### Tutor

*Mathematics Department: Probability & Statistics, Calculus I-III, Linear Algebra*

January 2020 – March 2020

*Temple University*

## ACTIVITIES

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**Committee Member**, Duke University CPS New Student Recruitment

**Vice President**, Temple University Data Science Community

**Ambassador**, Honors Admissions and Transitions Team

**Attendee**, SAMSI Undergraduate Workshop

**Volunteer**, Temple Honors Appalachia

January 2023 – Current

December 2020 – August 2022

August 2019 – August 2022

May 2021 – May 2021

August 2018 – August 2019