

# KISHORE VASAN

Boston, United States

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## OBJECTIVE STATEMENT

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A highly motivated and spirited learner who is excited about what life offers. My research uses tools from network science, temporal networks, data visualization to improve the funding ecosystem.

## EDUCATION

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### Northeastern University

September 2020 - Present

PhD in Network Science

Concentration: Scholarly networks

Advisor: Albert-Laszlo Barabasi

### University of Washington

September 2016 - June 2020

Bachelor of Science

Overall GPA: 3.60/4

Major: Informatics - Data Science; Minor: Quantitative Science

Advisor: Jevin West

## TECHNICAL STRENGTHS

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### Computer Languages

Python, R, mySQL, Java, React, HTML, postgreSQL

### Software & Tools

RStudio, Gephi, networkx, matplotlib, numpy, pandas, pytorch

## EXPERIENCE

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### DataLab, Information School

September 2017 - August 2020

*Undergraduate Research Associate*

- Theme: Science of Science. I analyze large scale bibliometric data on scholarly literature.

### Collective dynamics in co-funding of clinical trials

July 2019 - Present

- Assessing the scientific impact of different funding strategies in clinical trials. The goal is to untangle the relationship between funding agencies through a co-funding network.
- Funded by the Bill & Melinda Gates Foundation.

### Measuring scientific buzz using keywords

July 2018 - June 2019

- Comparing the applicability of keywords and abstracts in describing research trends. I discovered that keywords are a powerful resource for identifying hot topics than abstracts.
- Funded through scholarship from the Mary Gates Endowment.

### Mapping cross-departmental collaboration at UW

September 2017 - August 2018

- How impactful are multi-departmental collaboration at a large scale public university? We discovered an effect of compartmentalization where departments that collaborate together, also cite each other.
- I worked on disambiguation of departmental and institutional affiliations of authors over 60k papers

### Information School, University of Washington

Spring 2018 - Spring 2019

*Teaching Assistant, INFO 201 - Data Visualization using R.*

- As a TA for over 100 students, I conducted weekly lab sessions, answered online questions, and graded weekly assignments. The course covers source control and interactive data visualization principles.

## Genpact Inc.

June 2017 - August 2017

### *Data Science Intern*

- Enhancing customer care analytics by automatic emotion recognition system by extracting voice features and unsupervised topic clustering of GM Financial chat transcripts using latent semantic analysis.
- Worked in a team of 4 people and presented a proof of concept to the upper management.

## PUBLICATIONS

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### Journal Publications

**Who to Fund with? Examining the social structure of co-funding in clinical science.** 2020  
*Kishore Vasan, Carl Bergstrom, and Jevin West.*

Target Journal: TBD (In Prep)

### Conference Papers

**Is together better? Examining scientific collaboration across multiple authors, departments and institutions.** August 2018

*Lovenoor Aulck, Kishore Vasan and Jevin West.*

Knowledge Discovery and Data mining(KDD): BigScholar workshop 2018. London, UK.

**Measuring scientific buzz.**

March 2019

*Kishore Vasan and Jevin West.*

Information Schools Conference (iConference) 2019 as a poster. Washington, DC.

**Should granting agencies actively engage in co-funding?**

January 2020

*Kishore Vasan, Carl Bergstrom, and Jevin West.*

NetSci-X 2020 as a poster. Tokyo, Japan.

### PrePrint Papers

**SciSight: Combining faceted navigation and research group detection for COVID-19 exploratory scientific search** May 2020

*Tom Hope, Jason Portenoy\*, Kishore Vasan\*, Jonathan Borchardt\*, Eric Horvitz, Daniel Weld, Marti Hearst, and Jevin West.*

\* - denotes equal contribution

## PRESENTATIONS

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**Research Exposed!** Population Health Initiative (PHI) panel

March 4, 2020

**Undergraduate Research Symposium** Presented work on co-funding networks  
2020

May 15,

## SERVICE AND ACHIEVEMENTS

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**Mary Gates Research Scholarship**

2018 - 2019

- A highly selective award given to undergrads at the University of Washington pursuing research.
- I received this award to develop techniques to map research trends using author keywords.

**Society of Network Scientists, UW**

Fall 2019 - Summer 2020

*Co-Founder, Vice President*

- A campus wide initiative with an aim to promote and encourage research in network science. The organization acts as a platform for fellow researchers to interact and collaborate.
- We host weekly reading groups on social networks, panel discussions, and invite distinguished speakers.
- The group also serves an eScience Special Interest Group (SIG) on networks, and a local chapter of *The Society of Young Network Scientists* (SYNS).

### Informatics Admission Committee

Spring 2019

- Helped review undergraduate applicants for Informatics, a competitive major.
- Comprehensively reviewed the applicant based on personal statement, intent to major, and grades.

## CLASSROOM PROJECTS

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### Crawling Wikipedia Graph

April 2019 - June 2019

*Exploring the edit dynamics of users in Wikipedia*

*Statistical Analysis of Social Networks*

- Mining large graphs reveals information; temporal network of the same reveal evolution. However, performing novel algorithms on these large graphs can be computationally expensive. We need methods that can provide an un-biased sample that would be representative of the underlying large network.
- In this work, we evaluated different random walks by crawling a large online editing network, Wikipedia.
- Our *findings* include - simple random walk is ineffective when sampling graphs with high tailed distribution, and re-weighted random walk outperforms other methods for graph sampling.

### Does location affect Food Security?

April 2018 - June 2018

*Analyzing Food Security in the United States*

*Population Health Informatics*

- Motivation comes from the fact that places along the coast have ease of access to food than the places in the middle of the land, especially during unfriendly seasons.
- Looked at Food Security through the lens of Food Accessibility, Food Nutrition and Food Expenditure.
- Used several visualizations and performed K-Means clustering of states within United States to explore geo-location impact on Food Security. Deliverables included a short paper and a R Shiny app.
- *Discovered evidence of similar food security levels along geographical lines*, in particular 3 main regions in the United States were observed.

### Does President Trump's tweets have an impact on Forex?

October 2017 - December 2017

*Focus on US-South Korea exchange rate*

*Core methods in Data Science*

- Worked in a team of 4 to find out if there is an effect on the US-South Korea exchange rate every time President Trump tweets about North Korea.
- Used twitter API to gather approximately 6800 tweets. Parsed out all tweets that pertains to North Korea. Performed Difference-in-Differences econometrics method with Canada as our control state.
- Preliminary results showed that the *value of South Korea currency decreases with every tweet*. That is, the value of US currency goes up.

## COURSEWORK

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**QSCI 482** - Statistical Inference in Applied Research I

**QSCI 483** - Statistical Inference in Applied Research II

**STAT 567** - Statistical Analysis of Social Networks

**MATH 308** - Matrix algebra with applications

**MATH 309** - Linear analysis

**MATH 324** - Advanced Multi-variable Calculus I

**INFO 371** - Advanced methods in Data Science

**INFO 430** - Advanced database design and management

**CSE 373** - Data Structures and Algorithms

**CSE 415** - Introduction to Artificial Intelligence

**CSE 417** - Algorithmic Complexity (In Progress)

**QSCI 497** - Complex Analysis using Agent Based Models (In Progress)