

# Zheng Huang

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## Education

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### University of Virginia

Master of Computer Science, major GPA: 3.95/4.00

- Coursework: Design and Analysis of Algorithms, Machine Learning, Vision&Language, Graph Mining, Operating System

*Aug 2019 - Dec 2021*

*Charlottesville, VA, United States*

### University of British Columbia

UBC Visiting Student, Department of Electrical and Computer Engineering

*June 2018 - August 2018*

*Vancouver, BC, Canada*

### Hebei University of Technology

Bachelor of Computer Science, major GPA: 87/100

*Sept 2015 - June 2019*

*Tianjin, China*

## Programming

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- Programming in Python/Java/C++/C/R/Javascript/HTML/CSS/SQL/ MATLAB
- Skillful in PyTorch/TensorFlow/Scikit-learn/Latex

## Research Experience

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### Empowering Next POI Recommendation with Multi-Relational Modeling

*Sep 2020 - Jul 2021*

*Research Assistant, advised by Professor [Jundong Li](#)*

- Studied on Points of Interests (POI) recommendation by capturing the influence of multiple relations
- Utilized multiple Graph Convolutional Networks (GCNs) with Self-Attention mechanism to capture multiple user-user social relations (family or colleague) and user-location check-in relations
- Adopted coupled Recurrent Neural Networks (RNNs) to capture the mutual influence between users and POIs over time
- Conducted in-depth research on recommender system, sequential recommendation and Graph Convolutional Networks

### Assessing the Causal Impact of COVID-19 Related Policies on Outbreak Dynamics

*Sep 2020 - Mar 2021*

*Research Assistant, advised by Professor [Jundong Li](#)*

- Studied on the causal effect of different policies in reducing the spread of COVID-19 in the US
- Worked on a team and developed a neural network framework (GCNs&RNNs) based on time-varying observation data to control the influence of confounders, and integrated data from different data sources
- Investigated the problem of causal inference and COVID-19 observational social network data

### Identify Human-brand Co-location Network

*May 2020 - Jan 2021*

*Research Assistant, advised by Professor [Natasha Zhang Foutz](#)*

- Studied on identifying broad human and brand co-location networks to advise personalized recommendation
- Preprocessed large scale location GPS data and decorated POIs for check-in data in a distributed environment with PySpark
- Investigated the application of distributed computing and clustering algorithms

## Project Experience

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### Enrich Sequence to Sequence Video to Text Captioning with Action Recognition

*Sep 2020 - Dec 2020*

- Proposed a novel model, S2VTACT, to capture action features from video skeleton graphs with spatial-temporal GCN
- Utilized a stack of 2 recurrent units (GRU) encoders and decoders to learn video captioning with injected action features
- Investigated video captioning and applications of natural language processing (NLP)

## Publication

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- **Zheng Huang**, Jing Ma, Natasha Zhang Foutz and Jundong Li, “Empowering Next POI Recommendation with Multi-Relational Modeling“, Submitted
- Jing Ma, Yushun Dong, **Zheng Huang**, Daniel Mietchen and Jundong Li, “Assessing the Causal Impact of COVID-19 Related Policies on Outbreak Dynamics: A Case Study in the US“, Submitted, [Arxiv](#)

## Others

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- **Awards:** Top Academic Fellowship (2016, 2017, 2018)
- **External Reviewer:** PAKDD’21, WSDM’21
- **Interests:** Guitar, Piano, Driving