

Jessy (Xinyi) Han

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EDUCATION

Massachusetts Institute of Technology, Cambridge, MA

PhD student at Institute for Data, Systems, and Society

- Michael Hammer Fellowship

Columbia University,

New York, NY /May 2020

B.S. in Computer Science, Minor in Applied Math and Economics

- GPA 4.10/4.0, Summa Cum Laude
- Russell C. Mills Award

AWARD(S)

• Honorable Mention for 2020 Outstanding Undergraduate Researcher Award

PUBLICATION

• Ana-Andreea Stoica*, **Jessy Xinyi Han*** and Augustin Chaintreau, Diversity and Bias in the Influence Maximization Problem, Poster Session at WINE'19. (* The authors have contributed equally.)

• Ana-Andreea Stoica, **Jessy Xinyi Han** and Augustin Chaintreau, *Seeding Network Influence in Biased Networks and the Benefits of Diversity*, The Web Conference, WWW'20. (Oral Presentation)

COURSEWORKS

Computer Science

- ML, DL
- Computational Learning Theory
- Natural Language Processing
- Computer Graphics

Math, Stats & Economics

- ODE, PDE, Differential Geometry
- Modern Algebra
- Macro, Micro, Econometrics
- Game Theory
- Political Economics

WORK EXPERIENCES

Researcher – Network-based Fake News Detection

| Columbia University /Jan 2020 – Now

- Construct diffusion network of WhatsApp group messages and detect fake news according to diffusion patterns
- Supervised by Prof. Augustin Chaintreau

Researcher – Fairness in Social Influence

| Columbia University /Jan 2019 – March 2020

- Design new algorithms to select seeds according to fairness metric to achieve both fairness and efficiency advantage over traditional influence maximization algorithms
- Paper accepted by TheWebConf 2020 for an oral presentation
- Supervised by Prof. Augustin Chaintreau

Researcher – Reinforcement Learning in Promoting Union Participation

| Columbia University / Sep 2019 – Feb 2020

- Design RL models to encourage union chatroom participation
- Supervised by Prof. Suresh Naidu

Researcher – Econ-CS Projects

| Columbia University /Jan 2019 – Feb 2020

- Survey on sampling methods for massive data including count sketch, sub-Gaussian random projection, SRHT and sparse random projection
- Build LSTM model to forecast bond risk premia
- Supervised by Prof. Serena Ng

Intern – Anomaly Detection Models for Google Ads Risk Engine

| Google Mountain View /May 2019 – Aug 2019

- Design anomaly detection models with better performance
- Achieve an AUROC of 0.6 and a suspension time advantage of 13 minutes than Google's current model on production data

Intern - Latency Analysis of Google Fuchsia OS

| Google San Francisco /May 2018 – Aug 2018

- Instrument storage devices for requested parameters and latency
- Analyze traces of the storage devices to compute latency behavior of Fuchsia, Google's next generation of operating system
- Develop models with a success rate of 99.77% to deterministically predict latency

PROJECTS

Deep Learning/SLP: Research project **Silvius** /Jan - Dec2019

- Develop Silvius, which is a Kaldi-based speech recognition system for controlling Linux by voice
- Train neural network with collected voice data achieving a WER of 2.5%