

# Yingchen (Eric) Ma

Computational Science and Engineering Department, Georgia Institute of Technology, Atlanta, GA 30308

Email: [yma473@gatech.edu](mailto:yma473@gatech.edu) | Phone: (248) 719-6226 | Homepage: <https://yma17.github.io/>

## Education

- Ph.D. in Computer Science, **Georgia Institute of Technology** (Aug 2023 - present)  
*Advisor:* Srijan Kumar. *Planned minor:* Public Policy.
- M.S. in Computer Science, **Georgia Institute of Technology** (Aug 2021 - May 2023)  
*Specialization:* Machine Learning. *GPA:* 3.78/4.00.
- B.S. in Computer Science, **University of Michigan** (Sep 2017 - May 2021)  
*GPA:* 3.54/4.00.

## Research Interests

Misinformation / Counter-Misinformation	Online Interventions
Social Media Analysis	Computational Social Science
Natural Language Processing	Machine Learning
Data Science	Statistics

## Publications

- *Characterizing and Predicting Social Correction on Twitter* [[pdf](#)]  
**Yingchen (Eric) Ma**, Bing He, Nathan Subrahmanian, Srijan Kumar.  
15th ACM Web Science Conference (WebSci'23).
- *Measuring and Mitigating Group Inequalities In Resource Allocation*  
Arya Farahi, **Yingchen (Eric) Ma**, Angela Ting.  
ACM Journal on Responsible Computing.

## Current Projects

- **Analyzing Disparities in Social Media Counter-Misinformation:** Leading a project to investigate differences in the amount of counter-misinformation posted towards misinformation-spreading users across demographic attributes such as race, sex, and education.
  - Advised by [Prof. Srijan Kumar](#), Assistant Professor, CSE @ Georgia Tech

## Previous (completed) Projects

- **Analyzing and Predicting Twitter Counter-Misinformation:** Investigated features of misinformation-spreading tweets and users that correlate with increased likelihood to receive replies that counter / debunk said misinformation.
  - Advised by [Prof. Srijan Kumar](#), Assistant Professor, CSE @ Georgia Tech

- **Multilingual Analysis of Autism Discussion on Twitter:** Investigated the discourse surrounding autism on Twitter across various languages, through analysis and comparison of sentiment, topical focus, and engagement statistics.
  - Course final project for CS 7650 (Natural Language) @ Georgia Tech
- **Analysis of Anxiety Discussion on Twitter:** Investigated the relationship between features of tweets that aim to seek mental health support for anxiety, and the likelihood to receive tweet engagement and supportive replies ([repository](#)).
  - Course final project for CS 6474 (Social Computing) @ Georgia Tech
- **Urban Road Repair Proposal:** Led a project to develop an end-to-end decision pipeline to propose roads in an urban setting, with the objective of maximizing economic, demographic, and accessibility related benefit to the community ([repository](#)).
  - Advised by [Prof. Arya Farahi](#), Assistant Professor, SDS @ UT Austin
- **Neural Processes Project:** Implemented Pytorch variants of neural processes (NPs), a type of deep latent probabilistic model ([repository](#)). Applied NPs to evaluate the performance of a domain adaptation algorithm proposed in a submission to ICML 2021 ([link to paper](#)).
  - Advised by [Prof. Ding Zhao](#), Assistant Professor, MechE @ Carnegie Mellon

## Work Experience

Graduate Research Assistant, **Georgia Institute of Technology**, Atlanta, GA (Aug 2022 - present)

- Working on “Counter-Misinformation” projects - see above under “Current / Previous Projects”

Technology Solutions Intern, **Pioneer Natural Resources**, Irving, TX (May - Aug 2023)

- Performed machine learning based risk assessment on physical, chemical, and operational factors that contribute to scaling and subsequent failure of electrical submersible pumps (ESPs) used for oil extraction.

Programming Intern, **Wal Fuel Systems**, Livonia, MI (Dec 2021 - Apr 2022)

- Implemented a genetic algorithm to propose more distance, time, and fuel efficient company truck delivery schedules ([repository](#)).
- Delivered end-to-end pipeline for company employees to run, that utilizes the algorithm to generate daily truck routing decisions based on updatable location and demand data.

## Awards

**Marshal D. Williamson Fellowship** (Apr 2023)

- Awarded by Georgia Institute of Technology - \$1.5K USD

## Skills

- **Technical (computational):** Machine learning, deep learning, natural language processing, graph learning, applied data analysis, data structures, algorithms.
- **Technical (mathematical):** Optimization, linear algebra, probability, statistics, calculus.
- **Programming languages:** Python (proficient), C++ (proficient), SQL, C, Java.
- **Libraries/frameworks/tools:** ML libraries (Pytorch, Tensorflow, scikit-learn), Numpy, Pandas, Matplotlib, Plotly, Streamlit, Jupyter Notebook, Google Colab, Git, Linux, Docker.