Violet (Xinying) Chen

4765 Forbes Ave, Pittsburgh, PA 15213 · violetchen@cmu.edu · (404) 432-9605

EDUCATION

Carnegie Mellon University, Tepper Business School — **Pittsburgh, Pennsylvania**

- Ph.D. in Operations Research, Minor in Algorithms — *Expected May 2022*
  Dissertation: Optimization Methods for Understanding and Attaining Fairness in AI
- M.S. in Operations Research — *May 2019*
- William Larimer Mellon Fellowship Recipient, GPA: 3.67/4.30

Georgia Institute of Technology — **Atlanta, Georgia**

- B.S. in Applied Mathematics — *May 2017*
- B.S. in Business Administration – Information Technology Management — *May 2017*
- GPA: 3.97/4.00, Graduation with Highest Honor

AWARD

Egon Balas Award for Best Student Paper in Operations Research/Algorithms, Combinatorics, and Optimization — *March 2019*

RESEARCH PAPERS

A Just Approach Balancing Rawlsian Leximax Fairness and Utilitarianism, **V.X. Chen**, J.N. Hooker. *AIES '20: Proceedings of the 2020 AAAI/ACM Conference on AI, Ethics, and Society.*

Balancing Fairness and Efficiency in an Optimization Model, **V.X. Chen**, J.N. Hooker. *Submitted.* Preprint available at https://arxiv.org/abs/2006.05963.

Online Convex Optimization Perspective for Learning from Dynamically Revealed Preferences, **V.X. Chen**, Fatma Kılınç-Karzan. *Submitted.* Preprint available at https://arxiv.org/abs/2008.10460.

Fair Sequential Minimal Optimization for Computing Fair Support Vector Machines, **V.X. Chen**. *Submitted.*

Fairness through Optimization, **V.X. Chen**, J.N. Hooker. *Submitted*. Preprint available at https://arxiv.org/abs/2102.00311

Modeling and Eliciting Dynamic Moral Preferences, **V.X. Chen**, Hoda Heidari. *Working paper*.

INDUSTRY EXPERIENCE

NCR Corporation — **Duluth, Georgia**

Data Science Intern, Services Enablement — *May 2017 – August 2017*

- Conducted research on data visualization best practice with focuses on usability enhancement, design consistency and performance acceleration.
- Developed best practice guidelines for standardizing and optimizing design of Tableau dashboards.
- Analyzed features of clustered report generation queries and recommended cluster profiling strategies.

Management Information System Intern, IT Governance — *June 2016 – August 2016*

- Automated periodical HR data auditing process with Oracle Enterprise Data Quality (EDQ) software.
- Facilitated communication and resource sharing by consolidating a multi-team Sharepoint site.

TEACHING EXPERIENCE

Carnegie Mellon University — **Pittsburgh, Pennsylvania**

Instructor, 70371-A Operations Management — *January 2020 – May 2020*

- Taught bi-weekly lectures and organized course materials on topics including process analysis, process coordination and strategic operations.
- Transitioned course into online format in response to COVID-19 using live lectures, online assessments, etc.

Teaching Assistant — *August 2018 – Present*

- Led discussion sessions for PhD courses: Linear Programming, Convex Optimization, and undergraduate core course: Optimization for Business.

- Updated assignment and quiz materials for MBA elective courses: Introduction to Probability and Statistics, Business Networks

LEADERSHIP/VOLUNTEER EXPERIENCE

CMU INFORMS Student Chapter

President *July 2020 – Present*

- Organized virtual Women in Academia Panel and Discussion, which had 4 panelists and over 20 participants in different stages of academia careers.
- Provide overall leadership and direction to the chapter organization including events and member recruitment.
- Establish short term action items and long term goals cooperatively with chapter board.

YinzOR 2019 Student Conference Co-Chair *March 2019 – August 2019*

- Oversaw and coordinated the 3rd Annual YinzOR conference, a two-day single track conference for PhD students in OR/MS related fields, which had over 60 participants with more than 30% from outside Pittsburgh.
- Recruited organizing committee and led discussion on program, speaker and department invitation list.
- Managed marketing and promotion activities to faculties and students in more than 20 universities.
- Improved sponsorship opportunity materials, which helped to secure over $10000 external funding.

RELEVANT COURSEWORK

Operations research: Linear programming, Integer programming, Convex optimization, Graph theory, Combinatorial optimization, Constraint programming
Mathematics: High dimensional statistics, Discrete math
Computer science: Fairness in machine learning, AI ethics, Computational social choice, Algorithms
Operations management: Inventory theory, Queueing theory

SKILLS

Programming language: Python, MATLAB, R, Java
Optimization software: Gurobi, CPLEX, Mosek
Other software: Tableau, Microsoft Excel Risk Solver, Oracle EDQ, Visio
Business: Database management (SQL), Project management, System analysis and design
Languages: Chinese – native, English – bilingual proficiency, Japanese – working proficiency