Jerry Lingjie Mei

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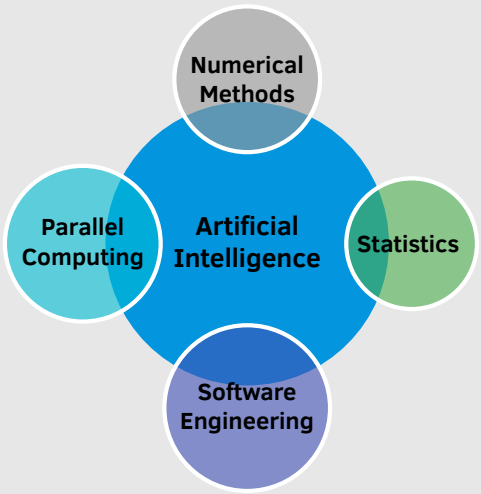
Skills

Overview



Tools

Basic → Proficient

Python

C++ • Julia • Matlab

Java • LaTeX • Markdown

Projects

Competitive SIR Model - Network dynamics in a new compartmental model
Nonlinear Elliptic PDE - Using Multigrid and Anderson acceleration to solve PDE
Fast Multiple Method - Fast computation of force in a n-body system
DeepTraffic - Navigating through traffic using neural networks
Warcraft - Simulation of Warcraft actions

Education

2017 - **Massachusetts Institute of Technology**

- Candidate for bachelor degree in Applied Mathematics (18) and Computer Science (6-3)
  Expected graduation in 2020
- Relevant coursework:
  Computer Vision, Machine learning, High Dimensional Statistics, Network science, Numerical Methods, Computational Cognitive Science, Software Construction, Design of Algorithms
- Grade Point Average: 5.0

2016 - 2017 **Peking University**

- Candidate for S.B. in Mathematics
- TOEFL: 111, GPA: 3.86/4.0

Experience

July 2016 **57th IMO Gold Medalist** IMO

- Participated in the 57th IMO at Hong Kong.
- Solved a variety of problems in algebra, number theory, geometry and combinatorics
- Scored 41 out of 42 points.

Dec 2017 **Putnam Competition 2017** Putnam

- Top 25 Individual

Research

Jun 2019 - **Learning Intuitive Physics with AI** CoCoSci Group, CSAIL, MIT

- Create dataset and neural models that helps AI learn the basical rules of physical world
- Instructed by Jiajun Wu & Josh Tenenbaum

Feb 2018 - Jul 2019 **Generic and Efficient Convolutions in Julia for Machine Learning on Non-traditional Numeric Types** Julia Lab, CSAIL, MIT

- Optimizing convolutions in multiple numeric types faster in Julia
- Instructed by Alan Edelman

Oct 2017 - Jan 2018 **Perfect Sampling in 2d Statistical Mechanics** Department of Math, MIT

- Study and sample the state distribution of melted crystals on a Lozenge table
- Instructed by professor Vadim Gorin

Publications

- L. Mei, J. Wang. Application of Cayley-Menger Determinant in 3-dimensional Simplex. *High School Mathematics Teaching*, 2015, (04), pp. 59-61.
- L. Mei, J. Wang. Techniques in Proving Symmetric Inequalities. *Middle-school Mathematics*, 2016, (17), pp. 72-73