Michael Wang

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Education

- **Purdue University** — West Lafayette, IN
  Master of Science in Industrial Engineering & Operations Research; GPA: 3.74 — *May 2019 – Aug. 2020*
  Relevant Courses: Deep Learning & Computer Vision, Numerical Computing, Data Engineering
- **Purdue University** — West Lafayette, IN
  Bachelor of Science in Industrial Engineering; GPA: 3.94 — *May 2016 – Dec. 2018*

Experience

- **NASA Langley Research Center** — Hampton, VA
  Software Engineering Intern — *Jan. 2019 - May 2019*
  - Increased the efficiency of machine learning and uncertainty quantification software by 20% by leveraging high-performance parallel computing resources with Python package mpi4py.
  - Developed the Python package ViPrPy (Visualizing Probability with Python).
  - Practiced test-driven development and Clean Code principles in a major refactor of NASA code for crack diagnosis.
- **Purdue University** — West Lafayette, IN
  Research and Teaching Assistant — *Dec 2016 - Present*
  - **Research Assistant - CONNPlexity Lab:** Utilize data analysis tools such as principle component analysis (PCA), clustering algorithms, and genetic programming to explore fMRI brain connectivity data.
  - **Teaching Assistant - MATLAB:** Performed live code demonstrations, addressed student questions, and provided meaningful feedback to facilitate learning in a class of 120 undergraduate students.
- **Meijer** — Grand Rapids, MI
  Labor Analytics Intern — *May 2018 - Aug. 2018*
  - Implemented data-driven solutions to the front-end checkout that save $3.6 million per year across 242 stores.
  - Automated labor departments frequently-used manual processes by creating custom macros in VBA.
- **Summer Undergraduate Research Fellowship** — West Lafayette, IN
  Research Fellow — *May 2017 - Aug. 2017*
  - Created machine learning model that predicts attention span given subjects fMRI data.
  - Presented project in research symposium with an audience of 50 students and faculty.

Projects

- **Indiana Long Term Care Facilities** — *Jan. 2019 - May 2019*
  - Used Python packages Beautiful Soup, matplotlib, and cartopy to scrape, compile, and present LTC facility data.
  - Investigated causes of preventable trips from LTC facilities to the ER with machine learning tools in scikit-learn.
- **Pandemic Disease Spread Mitigation** — *Aug. 2017 - Dec. 2017*
  - Synthesized population of 100,000+ individuals based on public demographic data with a Monte Carlo simulation.
  - Performed clustering analysis using igraph in R to find highly connected target nodes within the population.
  - Simulated 100-day disease spread with MCMC methods and identified optimal policies with decision trees.

Awards

- Bob and Ellie Shadley Scholarship in Industrial Engineering
- Purdue Summer Undergraduate Research Fellowship
- Dean's List for all semesters
- Phi Beta Kappa

Skills & Miscellaneous

- Python, MATLAB (proficient)
- R, SQL, Julia, MS Excel (intermediate)
- Git, Linux, MPI, TDD, GCP, Tableau
- English, Mandarin (native)
- Spanish (conversational)
- Ironman Triathlon 70.3 Finisher