Michael Wang

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michaelwang.codes

Education

- **Purdue University** — West Lafayette, IN
  Master of Science in Industrial Engineering & Operations Research; GPA: 3.94 — *May 2019 – Aug 2020*
  Relevant Courses: Deep Learning & Computer Vision, Statistics, 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 efficiency of machine learning software by 20% with mpi4py and high-performance computing resources.
  - Independently 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 PCA, deep learning, clustering, and genetic programming to maximize subject-level identifiability and explore patterns in 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 department's frequently-used manual processes by creating custom macros in VBA.
- **Summer Undergraduate Research Fellowship** — West Lafayette, IN
  Research Fellow — *May 2017 - Aug 2017*
  - Trained machine learning model that predicts attention span given subject's resting-state fMRI data.
  - Presented research project in a symposium with an audience of over 50 students and faculty.

Projects

- **Credit Card Combination Optimizer** — *Feb 2020 - Mar 2020*
  - Developed a tool in Python to return the credit card spread that maximizes cash back given monthly spending.
  - Built a web application in Flask with a streamlined user interface to offer card recommendations to the public.
- **Sequential Monte Carlo for Python** — *Jan 2019 - May 2019*
  - Created three modular classes to increase flexibility for the user in performing inverse uncertainty quantification.
  - Reduced size of main module from 496 to 236 lines, increased test coverage by 32%, and wrote new documentation.
- **Pandemic Disease Spread Mitigation** — *Aug 2017 - Dec 2017*
  - Synthesized population of 100,000+ individuals based on public demographic data with a Monte Carlo simulation.
  - Simulated 100-day disease spread with MCMC methods in R 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, R (proficient)
- SQL, Julia, MS Excel (intermediate)
- Git, Linux, MPI, TDD, GCP, Tableau
- English, Mandarin (native)
- eSports competitor & Tournament Organizer
- Ironman Triathlon 70.3 Finisher