# JUSTIN L. WANG

LinkedIn: https://www.linkedin.com/in/justinlwang/ justin.wang0@outlook.com
ORCID: https://orcid.org/0000-0002-9218-0744 (305) 304-8145


## EDUCATION

**University of Illinois at Urbana Champaign**
*Bachelor of Science* in Computer Science & Mathematics — May 2022

## TECHNICAL SKILLS

**Languages :** Python, Java, C, C++, MATLAB, MSSQL
**Tools/Frameworks :** PyTorch, Tensorflow

## EXPERIENCE

**WorldQuant** — **July 2022 - Current**
Quantitative Researcher — New York, New York, USA

- Researching market impact models in both US and global markets applicable to over 40 billion USD in notional
- Leading impact cost-aware portfolio optimization project over thousands of strategies for allocation and sizing

**D. E. Shaw & Co.** — **June 2021 - Aug 2021**
Quantitative Research Intern — New York, New York, USA

- Found and analyzed optimal trading execution algorithms for minutely-fixed depth trading in the presence of forecasts of varying realizations and impact
- Explored reinforcement learning methods for finding optimal policies, including policy gradient and first-order methods

**Matician** — **May 2020 - Aug 2020**
Research Engineer Intern — Palo Alto, California, USA

- Modified Google FaceNet's unified embedding algorithm to learn one-shot open set re-id
- Developed and extended Facebook Detectron2 pipeline to include one-shot identity verification
- Experimented with variants of triplet loss to create a discriminate embedding in high order manifolds

**Tsinghua University** — **June 2019 - Aug. 2019**
Tsinghua Laboratory of Brain & Intelligence — Haidian, Beijing, China
Machine Learning Researcher

- Researched brain-inspired computing and neurologic processes through unsupervised learning
- Worked on NLP through extraction of spatiotemporal features from speech using sparse convolutional autoencoders
- Programmed hierarchical encoding and decoding of phonemes to mimic brain decomposition of language in neuron clusters

## PUBLICATIONS[1]

**Wang, J. L.**, Curtis, J. H., Riemer, N., and West, M., "Learning coagulation processes with combinatorial neural networks," *Journal of Advances in Modeling Earth Systems*, 2022.

**Wang, J. L.**, Farooq, H., Ibrahim, A. K., and Zhuang, H., "Segmentation of Intracranial Hemorrhage Using Semi-Supervised Multi-Task Attention-Based U-Net," *Applied Sciences*, 2020.

**Wang, J. L.**, Zhuang, H., Ibrahim, A. K., Cherubin, L., and Ali, A. M., "Medium-Term Forecasting of Loop Current eddy Cameron and eddy Darwin formation in the Gulf of Mexico with a Divide-and-Conquer Machine Learning Approach," *Journal of Geophysical Research: Oceans*, 2019.

## RELEVANT COURSES

• Abstract Algebra • Abstract Linear Algebra • Data Structures • Deep Learning • Differential Equations • Optimization • Probability Theory • Real Analysis • Stochastic Processes

## AWARDS & MISC.

- 2020 Franz Hohn and J.P. Nash Scholarship Recipient
- 2020 UIUC HackIllinois Hackathon Best Novel Use of Mathematics
- 2018 United States of America Computing Olympiad (USACO) Platinum Division
- 2018 United States of America Mathematics Olympiad (USAMO) Qualifier

[1] For a full list please see https://www.justinlwang.com/publications/