Wenjie Li/ William

🌐 williamlwj.github.io/About   ✉ williamleewj@gmail.com   ☐ +852 55319861

Education

Purdue University   **West Lafayette, USA**
Ph.D. in Statistics   *Aug 2019 - Now*
o Admitted with full scholarship and teaching assistantships

Chinese University of Hong Kong   **Hong Kong S.A.R.**
Bachelor of Science, major in Mathematics.   *Sep 2015 - July 2019*
o Double Stream in Computational and Enrichment Mathematics.
o GPA: Cumulative: 3.828/4.0. Major: 3.873/4.0. **First Honor Graduate**
o Standard Test: TOEFL: 112 (R27, L30, S28, W27)
o 2017-2018 Exchange Student Ranking: **1st among all exchange students**

University of Pennsylvania   **Philadelphia, P.A.**
International Exchange Student in Mathematics   *Jan - May 2018*
o Three courses are undergraduate/graduate cross listed.
o GPA: Cumulative: 4.0/4.0. Major: 4.0/4.0

Research Experience

Application of Teichmuller Mapping and Beltrami Coefficients   **Sep 2018 - Jan2019**
Mathematical Imaging Group, Dept. of Math CUHK   *Advisor: Prof. Ronald Lui*
o Work on the application of Complex Analysis to Mathematical Imaging on brains and teeth
o Implemented Teichmuller mapping on teeth surfaces and performed illness classification
o Segmented datasets of tooth surfaces with landmark constraints

Poor-Rich Index for Economic Inequality in Societies   **Sep 2018 - Now**
Statistics and Economics Group, Dept. of Math CUHK   *Advisor: Prof. Raymond Chan*
o Derived and implemented the numerical Poor-Rich Difference Index and its confidence interval as
  a new statistical measure for income distributions.
o Compared the performance of new index with Gini, Zenga index and analyzed their differences.
o Tested the new index performance on different datasets such as Hong Kong 2011 Population Census
  and drafted papers.

Machine Learning of Lagrangian Coherent Structures   **Jun - Aug 2018**
Penn's Institute of Computational Science and ScalAR Lab   *Advisor: Prof. Paris Perdikaris*
o Collaborated with Prof. Paris Perdikaris, Prof. M. Ani Hsieh and her student Dhanushka Kularatne.
o Implemented algorithms that computes the Lyapunove Exponent for Double Gyre datasets.
o Collected Finite Time Lyapunove Exponents datasets for algorithm training and testing.
o Trained several neural network models to simulate the expensive computation by machine learning.

Machine Learning for DNA Sequences Separation   **May - Oct 2017**
Bioinformatics Lab, CUHK   *Advisor: Prof. Kevin Yip*
o Assisted the project of analyzing DNA sequence similarities by using gapped-indel-kmer-pattern.
o Optimized the efficiency of the algorithm and generated different kernel functions to separate
  DNA sequences into different groups.

Teach Experience

Purdue University
- STAT113, Statistics and Society. *Teaching Assistant*   19 Fall
  - Taught 3 recitations, graded multiple quizzes and projects
- STAT416, Probability. *Grader*   19 Fall
  - Set up homeworks and solutions, graded quizzes and midterms

Chinese University of Hong Kong
- GESH1010 General Education of S.H.Ho College. *Teaching Assistant*   16 Fall

Intern Experience

Sensetime Research   **May - Aug 2019**
Full-time Research Intern   *Advisor: Prof. Ping Luo*
- Work on the optimization and normalization methods in deep learning
- Build multiple mathematical models to analyze their performance in avoiding deadzones of ReLU

Mathematical Imaging Group, CUHK   **Mar - May 2019**
Part-Time Research Intern   *Advisor: Prof. Ronald Lui*
- Constructed and polished the dataset for Hippocampus diseases classification.
- Computed the Teichmuller map and the Beltrami Coefficients for the OSA dataset.

Scholarships/Awards

- Dean's List **(Top 10%)**   2018-19
- NTK Academic Group Scholarship   2019
- Heung To Educational Fund Mathematics Scholarship **(Top 2)**   2019
- Student Development Scholarship for Mathematics Undergraduates   2018
- The Cheng Foundation Scholarship **(Top 1%)**   2017
- The S.H. Ho Annual Scholarships for Outstanding Academic Performance **(Top 3%)** 2017
- The S.H. Ho Foundation Student Exchange Scholarships   2017-18
- Dean's List **(Top 10%)**   2016-17
- Yasumoto International Exchange Scholarship   2017
- Undergraduate Mathematics Scholarship **(Top 10%)**   2016
- Master's List **(Top 3%)**   2016-17
- The S.H.Ho Summer Exchange Scholarship   2015-16
- Dean's List **(Top 10%)**   2015-16
- Wei Lun Foundation Scholarships for Mainland Students   2015-16
- S.H.Ho Matriculation Scholarships for Academic Excellence   2015-16
- Honors at Entrance **(Top 1)**   2015-19

Skills

- **Computer Skills:** Python, MATLAB, LaTeX, R, Java, Ocaml, C++, MS Office, Adobe
- **Languages Skills:** Fluent English and Cantonese, native Mandarin, basic French.