

Shirui Chen

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1022 W. Johnson St. Rm. 705 Madison, WI

Education

University of Wisconsin, Madison, Bachelor of Science Candidate, November 2020

- Computer sciences major & math major
- Dean's list; GPA 4.0; Credits: 75

Research Experience

Undergraduate Researcher

Prof. Vikas Singh, UW Madison

- Design novel neural network structure that effectively learn medical image feature under Riemannian geometry
- Provide a better understanding of medical images for brain and cancer research

Madison, Wisconsin

July 2018- present

Computational Biology Researcher

Prof. Hong Li, Shanghai Institutes for Biological Sciences

- Published a journal article on *BioMed International*
- Wrote R script to explore the differences between gene expression datasets from different patient groups
- Used statistical methods like multivariate analysis of variance (ANOVA) to evaluate the impact of different factor

Shanghai, China

June 2016 - July 2017

Urban Traffic Modeling

Personal Research Project

- Modeled urban traffic using mixture of multivariate gaussian model and automata theory
- Explored agent-based programming language like NetLogo
- Used Gibbs sampling to generate data from mixture of distribution

Shanghai, China

January 2017 - June 2017

Competitions and Awards

ACM International Collegiate Programming Contest (ICPC)

- World Finalist of 43rd Annual World Finals
- Wrote C++ program to solve algorithmic problem related to dynamic programming, number theory, graph theory and computational geometry, etc

Verona, Wisconsin

November 2018

Mathematical Contest in Modeling (MCM) (March 2018)

- Meritorious Winner (Top 10% out of 10670 teams)
- Developed combined model of multivariate linear regression and differential equation model to assess and predict the usage of renewable energy
- Wrote R script to clean data and implement the model.

Madison, Wisconsin

March 2018

Brain Bee China National Neuroscience Championship (May 2017)

- First Prize winner (Ranked 4th among all the participants)

Shanghai, China

May 2017

Skills

Technical Skills R, Java, C++, Python, Linux, LaTeX, MySQL

Web & Design Adobe Photoshop, Adobe Illustrator