

# SHIRUI CHEN

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## EDUCATION

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### ***University of Wisconsin, Madison, Bachelor of Science Candidate, May 2020***

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

## RESEARCH EXPERIENCE

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### ***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

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### ***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***

### ***ACM International Collegiate Programming Contest (ICPC)***

- Ranked 22 out of 207 teams in NCNA
- Wrote C++ program to solve algorithmic problem related to dynamic programming, number theory, graph theory and computational geometry, etc

***Verona, Wisconsin***

***October 2017***

### ***Brain Bee China National Neuroscience Championship (May 2017)***

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

***Shanghai, China***

***May 2017***

## SKILLS

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

**Web & Design** Adobe Photoshop, Adobe Illustrator