# Guangyao Guo

Bachelor of Advanced Computing - **First Class Honour**
Honours Research Area: Theoretical Computer Science
Computational Data Science/Software Development
University of Illinois Urbana-Champaign , United States
University of Sydney, Australia

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## EDUCATION

•**University of Illinois Urbana-Champaign**  *Aug 2023 - Present*
*Master of Computer Science*  Current GPA: 4.0/4.0

•**The University of Sydney**  *Jul 2019 - Jun 2023*
*Bachelor of Advanced Computing (Honours)*  Grade: Honours Class I

•**Shanghai Jiao Tong University**  *Dec 2020 - Jan 2021*
*SCE Summer School*  GPA: 3.7/4.0

## EXPERIENCE

•**SACT: SYDNEY ALGORITHMS AND COMPUTING THEORY**  *Aug 2022 - Jun 2023*
*Honours Student Researcher*  **Supervisor: Dr. André van Renssen**
  − **Thesis:** *Online Routing on Delaunay Triangulations in the Presence of Obstacles*

## PERSONAL PROJECTS

•**Online routing algorithm on Delaunay triangulation in the presence of obstacles**  *Aug 2022 - Jun 2023*
*Honours Research Project*
  − Tools & technologies used: Theoretical Computer Science, Computational Geometry, Graph Theory
  − Evaluate the performance of previous algorithms in the presence of obstacles, propose adaptations and new bounds

•**Implementation of Usability and Security for end-to-end messaging platform**  *Mar 2023 - Jun 2023*
*Cybersecurity*
  − Tools & technologies used: Python, SSL/HTTPS/TLS, RSA
  − Design and implement a secure end-to-end messaging platform, using novel cybersecurity techniques to ensure the security of account information, certificates, protocols and data transmission.

•**Label noise robustness model experiment based on ResNet-18**  *Oct 2022 - Dec 2022*
*Advanced Machine Learning*
  − Tools & technologies used: Machine Learning, Python, Colab
  − Build transition matrix estimator and classification algorithms that are robust to label noise based on ResNet-18.

•**COVID-19 interdisciplinary research capstone project**  *Feb 2022 - June 2022*
*Data Science*
  − Tools & technologies used: Machine Learning, R, ShinyAPP
  − Build multiple machine learning models based on time series data of COVID-19 to predict, evaluate and present the association between policies and COVID-19.

•**Sydney Liveability Analysis**  *Mar 2022 - May 2022*
*Data Science*
  − Python, SQL
  − Gather and integrate information from several datasets in order to generate a 'liveability' report about 'liveable' suburbs for potential stakeholders to buy real estates in Greater Sydney area.

•**Agile Software Development for back-end bank system**  *Sep 2021 - Nov 2021*
*Software Development*
  − Tools & technologies used: JAVA, SQL, Scrum, CI/CD pipelines, Junit
  − Work in a Scrum team on developing a back-end bank system using the Scrum method and Agile development tools and practices, including Github, Gradle, Junit, Jenkins and so on.

## SKILLS AND INTERESTS

**Skills**: Java, Python, C, SQL, R, Machine learning, Scrum, CI/CD, Theoretical data analysis, Algorithm design
**Areas of Interest**: Computer Vision, Machine Learning, Medical Imaging, Theoretical Computer Science
**Languages**: English(Advanced), Chinese(Mother tongue), German(Basic)

## AWARD

•**Vice Chancellor's Global Mobility Scholarship - University of Sydney**

## POSITIONS OF RESPONSIBILITY

•**Student Representative,** School of Mathematics and Statistics, The University of Sydney  *Aug 2019 - Dec 2019*