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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LinkedIn Profile
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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: Machine Learning, Theoretical Computer Science, Algorithm design, Software Development
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*