

Chen Tianhao 陈天豪

Date of birth: 05 Sep. 1996

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Research Interest: Interpretable AI for Biomedical Studies; Reproducible Data Analysis



Education Qualifications

MSc in Data Science (Precision Medicine), **University of Macau** 08/2019 - 07/2022

- **Supervisor:** [Prof. Xiaohua Douglas Zhang](#); **GPA:** 3.58/4.00.
- **Thesis:** *Building a Shiny Web Application to Promote Data Management in a Multi-Center Project with Rodent Shrapnel Model* ([full-text](#)).

BSc in Materials Science and Engineering, **Harbin Engineering University** 08/2015 - 06/2019
(**Project 211**, [Double First-Class Plan](#))

- **GPA:** 83.5/100, **Major Ranking:** 32/143 (top 22.3%).
- *Exchange student* at **National Central University (Taiwan)** (09/2017 - 01/2018).

Trained Experience

2020 PKU Summer School in Biostatistics, Department of Biostatistics, **Peking University** 08/2020 - 08/2020

- Enrolled in seven minicourses on biostatistics, including *Causal Inference* and *Statistical Learning* ([link](#)).

Research Experiences

Data Management for a Multi-Center Project with Rodent Shrapnel Model 05/2021 - Present

GitHub Repo: <https://github.com/MuscleOne/MetalEmbeddedStudies/tree/dev>

- Handled high-throughput omics data (May-June 2021). Developed a database with a web interface integrating data from three sub-studies, **preparing a manuscript** (July 2021-Present).

Allergic Disease in China: A Multi-Center Epidemiological Survey 09/2020 - 07/2021

GitHub Repo: <https://github.com/MuscleOne/Allergic-Rhinitis-NA>

- **Data Management:** performed data quality control and curation of >2000 participants with ongoing visits.
- **Data Mining:** proposed real scientific questions and addressed them via quantitative approaches (regression, latent variable model and network analysis using R programming), **preparing a manuscript**.

Multi-Source Healthcare Data Integration and Mining 06/2020 - 08/2020

- Responsibility during my stay at the Guangzhou Medical University
- Harmonized and prepared for multi-source medical data (size: >10GB), participated in a paper ([full-text](#)).

Acquisition and Analysis of Digital Welding Signals 12/2018 - 05/2019

- Bachelor's Project in Harbin Engineering University, instructor: [Prof. Gai Dengyu](#)
- Built a LabVIEW-based real-time digital signal acquisition system for welding monitoring.

Part-Time Position at UM

Research Assistant, Faculty of Health Sciences, **University of Macau** 06/2020 - 02/2022

- Conducted research with Prof. Xiaohua Douglas Zhang.
- **Direction:** data management and reproducible analysis for biomedical studies.

Internship Experiences

Consumer Insight Trainee, **Bilibili merchandise, Bilibili Inc**, Shanghai 06/2021 - 08/2021

Intern Student, **First Affiliated Hospital of Guangzhou Medical University**, Guangzhou 06/2020 - 08/2020

Teaching Experience

Courses Served as Teaching Assistant at Harbin Engineering University

Student Teaching Assistant, 201411041 College Physics I at Spring 2017 04/2017 - 08/2017

- Gave in-class lectures to those who had to take the re-sit examination during the 2017 summer ([link](#)).

Volunteer Experiences

Volunteer, IEEE/RSJ IROS2019, Macau, China 11/2019 - 11/2019

Class-Leader, "Ban-Zhu-Yi" Left-Behind Children Care Project in Harbin, China 10/2016 - 04/2017

Programming Skills

Data Analysis: Proficiency in R and Python for reproducible data analysis; TensorFlow and PyTorch.

Development: Linux, Git, and Docker; R-Shiny, Python-Django (back-end); MySQL, MongoDB; Building R package.

Referees

Xiaohua Douglas Zhang, PhD

- **E-mail:** douglas.zhang@uky.edu, **Relationship:** Supervisor/Student
- **Position:** *Professor*, Department of Biostatistics, **University of Kentucky**, Lexington, KY, USA ([link](#))
Note: a former *Professor* at Faculty of Health Sciences, **University of Macau** (09/2016 - 12/2021).

Terence Chuen Wai POON, PhD

- **E-mail:** tcwpoon@um.edu.mo, **Relationship:** Instructor/Student ([HSCI3003](#), [HSCI7004](#), and HSCI7998)
- **Position:** *Associate Professor*, Faculty of Health Sciences, **University of Macau** ([link](#))