

Junkai LIN (Jack)

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Huitong South Rd. No.2044, Zhuhai City, Guangdong Province, China

EDUCATION

- **Hong Kong Baptist University** 09.2022 - 06.2026 (Expected)
Bachelor of Science (Hons) in Data Science Zhuhai, China
 - GPA: 3.38/4.0, 3.44/4.0 (WES)
 - Key Courses: Calculus (A), Linear Algebra (B+), Ordinary Differential Equations (B+), Mathematical Analysis (A), Real Analysis, Data Processing (A-), Advanced Statistics, Regression Analysis, Data Mining, Optimization, Numerical Computation

PROFESSIONAL EXPERIENCE (RESEARCH)

- **Hong Kong University of Science and Technology (Guangzhou)** [🌐] 08.2024 - Present
Research Assistant (Intern) Guangzhou, China
 - **PI: Dr. Julie Qiaojin LIN (Brain and Intelligence Research Institute, HKUST Guangzhou)**
 - Conducting bioinformatics research under the guidance of my supervisor, primarily focusing on base recognition of electrical signals from third-generation DNA sequencing machines based on deep learning neural networks, as well as identifying A-to-I modification behavior. Additionally, I am testing the generalization performance of models across different datasets.
- **Shenzhen Research Institute of Big Data & CUHK (Shenzhen)** [🌐] 10.2024 - Present
Research Assistant (Intern) Shenzhen, China
 - **PI: Dr. Lianmin ZHANG (Dean of Data-driven Smart City, Transportation, and Logistics Lab)**
 - Customer data analysis and market potential exploration of China Mobile (Hong Kong).

RESEARCH EXPERIENCE

- **Guangdong Province Key Laboratory of Data Science and Technology Cross Application** [🌐] 10.2022 - 06.2023
Research Group Member Zhuhai, China
 - **PI: Dr. Shuhong CHEN (Guangzhou University)**
 - Participated in the research programming group do research project "Guqin Reduced Character Spectrum Recognition".
- **BNU-HKBU United International College** [🌐] 10.2023 - 06.2024
Research Assistant Zhuhai, China
 - **PI: Dr. Jiaxing CHEN (Dept. of Computer Science, UIC)**
 - Participated in a research project in the field of bioinformatics under the guidance of the mentor, using machine learning and deep learning to study cell slices and perform clustering analysis.

COURSE PROJECTS

- **Database Management Systems: ["U-Dream" A Study Abroad Information Query Platform]** 04.2024 - 05.2024
Selection Poster in UIC 2nd Dept. of Computer Science-Data Science Poster Conference 2024 [🌐]
 - Developed DBMS knowledge for design a information query website.
 - Created some simulation data, ensuring the data volume is sufficient to validate the performance of the database.
 - Applied python to analyze study abroad admission information data.
- **Data Processing Workshop II: [eBooks Text Search Engine & CO² Emissions Data Analytic]** 04.2024 - 05.2024
Workshop Course Project [🌐]
 - This project details the development of an e-books file text search engine in a Distributed Systems utilizing Django, PySpark, and HTML/CSS, which enables efficient searching and downloading of books from Project Gutenberg.

- And also encompasses an in-depth analysis and visualization of global CO2 emissions from 1750 to 2021, identifying trends and key contributors to climate change using data from Kaggle.

- **Hong Kong Baptist University Summer Programme 2024**

07.2024 - 08.2024

Exchange & Summer School



- Attend COMP1006 Facets of Computing and COMP2046 Problem Solving Using Object Oriented Approach in HKBU, got A- (3.67/4.0) for both. Developed OOP (Java) knowledge for design a program.

HONORS AND AWARDS

- **2023 International Mathematical Modeling Contest For High Education [Finalist Prize]** 08.2023

Macao Foundation, Macao S.A.R. Government



- Article Title: Visual Recognition and Physical Quantity Estimation of "Sanxingdui" Cultural Relics

- **RSNA 2023 Abdominal Trauma Detection (Kaggle) [Ranking: 11%]**

09.2023

Radiological Society of North America



- This competition seeks to develop AI models that help rapidly and accurately detect and assess severe abdominal injuries using CT scans, aiming to improve trauma care and patient outcomes globally.

- **China Undergraduate Mathematical Contest in Modeling (CUMCM) [Province 3rd Price]**

09.2023

China Society for Industrial and Applied Mathematics



- Article Title: Optimization of the placement position of the heliostat field (in Chinese)

- **The Mathematical Contest in Modeling (MCM) [Participant]**

02.2024

Consortium for Mathematics and its Applications (COMAP)



- Article Title: Momentum in Tennis at Championships 2019

- **UM - Game-Playing Strength of MCTS Variants (Kaggle) [Ranking: 10%, Bronze Medal]**

12.2024

Maastricht University



- MCTS is a widely used search algorithm for developing agents that can play board games intelligently. Over the past two decades, researchers have proposed dozens, if not hundreds, of MCTS variants. Despite this, it's been challenging to determine which variants are best suited for specific types of games.

SKILLS

- **Programming Languages:** C++, C, Python, Matlab, Java
- **Web Technologies:** HPC Platform, Linux (Ubuntu), Docker, Hadoop, PySpark, Flask, Django
- **Database Systems:** MySQL, NoSQL
- **Data Science & Machine Learning:** Elementary ML (SKLearn), TensorFlow, PyTorch
- **Cloud Technologies:** Google Cloud, Tencent Cloud, AliCloud

LEADERSHIP EXPERIENCE

- **Committee Member (Finance)**

09.2024 - 06.2025 (A Academic Year)

Hall Student Committee, BNU-HKBU UIC



- In order to promote the construction of residential culture and lifelong learning communities, aim to communicate with residents in a comprehensive and close manner, and provide necessary support in a timely manner.
- At the same time, it also provides guidance for the lives of students and assists them in adapting to university life.

ADDITIONAL EXPERIENCE & INFORMATION

Languages: Chinese (Native level), Hokkien (Native level), Cantonese (Proficiency level), English (Proficiency level)

Interests: History and Culture of University, Badminton, Harry Potter, Japanese anime, Computer Game

REFERENCES
