

HAOTIAN ZHAI

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EDUCATION

The Chinese University of Hong Kong, Shenzhen

09/2019 – 06/2023

Major: Financial Engineering-Fintech Concentration | Minor: Statistics | First Class Honors

Core coursework: Basic Machine Learning, Database System, Introduction to Data Analytics, Data Structures, Programming Paradigms, Statistics Software, Statistical Inference, Regression Analysis, Calculus, Linear Algebra, Probability and Statistics

Awards: Dean's Honor List for the academic year 2020-2021, Dean's Honor List for the academic year 2021-2022

College Entrance Scholarship (\$26400 for academic excellence)

Bowen Scholarship II (\$16000 for academic excellence)

RESEARCH EXPERIENCE

Research Assistant, Deep Bit Lab

07/2022 – Present

Research Project led by Prof. Zhen Li

- Assisted in LiDAR point cloud generation based on Synthetic-to-Real Scene Flow Estimation and debugged the sampling process to ensure the successful production of raw data
- Wrote literature review for articles published since 2012, summarizing techniques related to segmented point clouds and domain adaptation tasks
- Designed Breadth-First-Search K-Nearest Neighbors Algorithm to automatically process the sampled metadata and effectively reduce the task complexity

PROFESSIONAL EXPERIENCE

ICBC Credit Suisse Asset Management Co., Ltd., Shanghai, China

06/2021 – 08/2021

Data Analyst Intern for Sales Department

- Integrated the purchase and sales data of different funds based on data crawling techniques including regular expressions
- Designed improved algorithms based on Linear Programming to help allocate product resources to outlets aiming at achieving the highest sales across all sales channels
- Wrote reports on the influence of fund portfolio changes on fund sales and used the Generalized Linear Model to analyze the effect
- Applied Robust Regression based on a self-designed 'RARR' package to determine the statistical portraits of medical and pharmaceutical funds as well as fund managers

ACADEMIC PROJECTS

Painting Synthesis: Combination of Information Retrieval and GANs

03/2022 – 05/2022

- Implemented Okapi BM25 model to make the image selection based on users' queries
- Used Multi-task Cascaded Convolutional Networks (MTCNN) to do the face extraction for portrait paintings
- Applied Modified VGG16 to act as the discriminator of the GAN model for landscape paintings
- Derived Image interpolation for latent points, where gradual changes from one image to another were visualized
- Google Colab: <https://drive.google.com/file/d/1UdAyXXIYUK1m7-p51NhjA6zir6ylai-f/view?usp=sharing>

Creation of RARR Package

12/2021

- Led the creation team and collaborated closely with colleagues for the Statistics Software course project
- Utilized R to create a self-defined package 'RARR' to help with residual analysis and robust regression
- Implemented varied functions in the package including data visualization, parameter tuning, and robust regression

COMPETITION ACHIEVEMENTS

- 3rd Prize** in Guangdong Province in National Student Mathematical Modelling Competition in 2021
- Champion** of Tennis Doubles Match in the 1st Chinese University of Hong Kong (Shenzhen) College Cup in 2021
- 2nd Place** in Shenzhen Linxiao Cup Texas Hold'em Poker Tournament in 2022

SKILLS

Software: Python (expert), R (expert), Java (proficient), C++ (proficient), MySQL (proficient)

Hobbies: Tennis (NTRP rating scale 3.5), Piano (Central Conservatory of Music Piano Grading Test Level Nine)

Language: English (TOEFL 112/120; GRE 332/340), Chinese (native)