LYU, Hanfang

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EDUCATION

The Hong Kong University of Science and Technology (HKUST), *Hong Kong, China* 2018/09 – 2022/06*
Bachelor of Science in **Mathematics** (Applied Mathematics Track), MCGA: 3.71/4.30
Bachelor of Science in **Computer Science** (Second Major)
Relevant coursework: Numerical Analysis (A+), Knowledge Discovery in Databases, Number Theory and Applications, Honors Probability (A+), Honors in Linear and Abstract Algebra I (A), Real Analysis (A-). Applied Statistics (A+). Honors Calculus II (A-), Honors Mathematical Analysis (A-), Honors Discrete Mathematical Tools for Computer Science (A+), Honors Calculus I (A).

Awards and Qualifications:
- The S.S. Chern Class of elite and talented students in Mathematics - Department of Mathematics, HKUST
- University Scholarship Scheme for Continuing Undergraduate Students 2019-2020 – HKUST
- Dean's List (TGA 3.7 or above, top 10%): 2018 Fall, 2021 Spring

Coursera, **Deep Learning Specialization** by DeepLearning.AI 2020/11/08
Course Certificates Completed: 1) Structuring Machine Learning Projects; 2) Sequence Models; 3) Neural Networks and Deep Learning; 4) Improving Deep Neural Networks: Hyperparameter Tuning; 5) Regularization and Optimization; 6) Convolutional Neural Networks Grade: 100.00% / Credential ID: J56QXRHLJB7G

Yichang No. 1 High School, *Yichang, China* 2015/09 – 2018/06
GAOKAO/JEE/NCEE 2018 (science track): 676/750, Top 0.1% in Hubei Province
Chinese Physics Olympiad 2017: The top 150 in Hubei Province (Second Prize)

RESEARCH AND PROJECT

Independent Study | HappyFinder – A Commonsense Mediated Happiness Recommender System with Dynamic Interaction | Supervisor: Prof. Xiaojuan Ma (HKUST) 2021/02 – Present
- Major Role: Led the project. Extracted structured happy activities from happy moments with positive agency in HappyDB. Designed algorithms to recommend activities based on commonsense generated from COMET-ATOMIC2020.
- Target Venue: top HCI conference as first author

Independent Study | Randomized Algorithms for Matrix Decompositions | Supervisor: Prof. Jian-Feng Cai (HKUST) 2021/02 – 2021/06
- Major Role: Explored algorithms for matrix approximation and learned real-world application problems.

UROP | Representation Learning of Social Survey Data | Supervisor: Prof. Han Zhang (HKUST) 2020/09 – 2021/06
- Major Role: Cleaned the survey data, applied some NLP tools to embed the questions and answers, and came up ways to calculate the similarities between the users. Explored GCN solutions for the project.

UROP | Correcting Geometric and Shading Artifacts of Camera Imaged Documents with Deep Learning | Supervisor: Prof. Desmond Yau-chat Tsoi (HKUST) 2020/02 – 2020/08
- Major Role: Constructed 3D meshes and generated training datasets for painting document corrections. Explored and tried different deep learning-based document restoration approaches to correct geometric and shading artifacts of camera-imaged paintings.

Project | $afe Route Planner | 2020 Google Girl Hackathon 2020/05 – 2020/07
- Semifinal Round Project in 2020 Google Girl Hackathon VI
- Major Role: Design and constructed the frontend of our project website.

UROP | Low-Rank and Sparsity Reconstruction in Data Science | Supervisor: Prof. Jian-Feng Cai (HKUST) 2019/09 – 2020/01
- Major Role: Learned Variational Autoencoder and tried to explain it from the probability perspective.

LANGUAGE AND SKILL

Language: Mandarin (Native), English (Fluent, TOEFL101/120), French (Elementary), Cantonese (Elementary)

Skill: Python, Java (Gradle), C++, Web, LaTeX, Markdown, etc.

Hobby: Badminton, Rubik's Cube, Piano, Hiking

EXTRA CURRICULAR

Peer Counsellor | "Happy Living" Peer Counselor Program, Counseling & Wellness Center, HKUST 2019/12 – 2020/11
- Conducted an online "Secret Angel" caring project with the group.
- Worked as a group to reach out to peers in need of support, encouragement and resource information.

Student Helper | Library, HKUST 2019/06 – 2019/10
- Delt with all the problems in the Commons & Media area and help with the technical facilities setup.
- Performed the counter duty and help with the library closing.