

CHONGFENG LING

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Education

Xi'an Jiaotong-Liverpool University

Sept. 2017 – June 2022

Bachelor of Science in Applied Mathematics, First Class Honours (Expected)

Jiangsu, China

The University of Liverpool

2022

Bachelor of Science (honors) in Applied Mathematics, First Class Honours (Expected)

Liverpool, UK

Relevant Coursework

- Numerical Analysis
- Optimization Theory
- Operation Research
- Java Programming
- Probability & Statistics
- Differential Equations
- Abstract Algebra
- Population Dynamics

Research Experience

A graph-based solver in the university timetable scheduling

Sept. 2021 – June 2022

Final Year Project

- Formulated timetabling problem in coloring of graph and decomposed into small sub-graph.
- Modified Tabu Search algorithm and its improved version to get benchmarks of XJTLU timetable assignment.
- Attempted Reinforcement Learning to scheduling problems and compared with heuristic algorithms.

Queuing System Simulation

Apr. 2020 – May 2020

Research Associate

Jiangsu, China

- Visited the operating conditions of a school restaurant, before modelling its passenger flow.
- Simulated queuing model based on Monte Carlo Method and visualized computing result on Matlab.

Indoor Localization Based on Wi-Fi Fingerprinting and CNN

Jun. 2018 – Aug. 2018

Research Assistant, Summer Undergraduate Research Fellowships in XJTLU

Jiangsu, China

- Presented a new location fingerprinting database comprised of Wi-Fi received signal strength (RSS) and geomagnetic field intensity measured with multiple devices at a multi-floor building.
- Mapped RSS data for a reference point to an image-like, two-dimensional array and provided preliminary results of localization based on Convolutional Neural Network.
- Used a modified random way point model to efficiently generate continuous step traces imitating human walking.

Internship and Project

Mathartsys, Inc

Feb. 2021 – Aug. 2021

Algorithm Research (NLP) Intern

Shanghai, China

- Generated and maintained SQL and Shell script to pull daily data automatically.
- Explored ways to visualize and send a daily report of test results to team members using Jupyter, Pandas and Excel.
- Modified, segmented and augmented voice transcription text based on Regular Expression and Word Embedding.
- Built a multitasking NLP system with BERT and provided support for the company's downstream business including forum public opinion analysis (Sentiment Classification) and sales voice quality (Named Entity Recognition). The system has been applied in a series of BMW automobile retailing stores with satisfying outcomes.

Awesome-XJTLU

Apr. 2021 – Now

Contributor

- Created a open-source knowledge sharing platform on Github Page for undergraduates, including course notes, internship consultation, and graduate program information.
- Collaborated with team members using version control systems such as Git to organize modifications tasks.

Technical Skills

Languages: Python, Matlab, Java, LaTeX, Git, SQL

Technologies/Frameworks: PyTorch, Linux, GitHub

Leadership / Extracurricular

XJTLU-Enactus

Sept. 2017 – Apr. 2019

Publicity Director, Project Manager

- Initiated and organized bad-looking fruits orientations near the campus and market; guided groups of more than 30 students and educated them about fruit supply chain and value of unsightly food.
- Supervised the daily operation of the project including event hosting and public relation.