

Zirui Zhao

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EDUCATION

Shenzhen University

Shenzhen, China

Bachelor of Engineering in Computer Science and Technology

Sept 2020 – Expected July 2024

- GPA: 89.6/100 (4.03/4.5)
- "Liyuan Star" (top 5% GPA) of Shenzhen University (the highest honor at the university level)
- Relevant courses: Linear Algebra, Optimization Methods, Computing Principles and Theory of Big Data, Introduction to Machine Learning, Computer Systems, Probability Theory and Mathematical Statistics, Data Structures, Java Programming, Design and Analysis of Algorithms, Database Systems, Data Mining, etc.

PUBLICATIONS

- *First Author, Wearable-Based Human Emotion Inference System*, ICECI 2021: Edge Computing and IoT: Systems, Management and Security pp 128–135. Online ISBN: 978-3-031-04231-7, Print ISBN: 978-3-031-04230-0

RESEARCH EXPERIENCE

Guangdong Institute of Big Data Big Data Computing Center

Shenzhen, China

Undergraduate Research Assistant to Prof. Zhang Qing

July 2022 – Present

- Collaborated with graduate students on a team project in NLP (Natural Language Processing)
- Familiarized the use of classical NLP models such as BERT(Dense Passage Retriever) and DPR.
- Provided research support by collecting literature and organizing data
- Attended regular weekly group meetings to follow up on the progress of the research group's projects
- Reported on the research progress to supervisors at weekly group meetings.

Guangdong Wireless Big Data and Future Network Engineering Technology Research Center Shenzhen, China

Undergraduate Research Assistant

July 2021 – July 2022

- Participated in the design and development of an Android mobile application of the human-computer interaction component of an augmented reality headset.
- Worked closely with the development team on designing and optimizing UI interface of the app.

ACADEMIC PROJECTS

Course Project – Introduction to Machine Learning

June 2022

- Used machine learning algorithms of reinforcement learning and deep reinforcement learning to develop dynamic NPCs for two classical video games
- Q-Learning: stimulating the learning of a mouse attempting to walk out of a maze
- DQN Learning: Using Deep Q Network and pytorch to train to algorithm catch and bounce a ball

Database System

- Used MySql and PHP to implement the Charity Management System
- Designed a relational database for a company that keeps track of charity record and donor profiles

Time – Present

Customer Churn Determination – A Project in Data Mining

Time — Present

- Built classification models to determine whether customers are churning, including data implementation of data statistics and visual analysis, data cleaning, feature construction, model selection, model evaluation
- Experimented several models, and concluded that decision trees and xgboost and lightgbm had the best results, with a model accuracy rate of 0.79

CAMPUS ACTIVITIES & COMPETITIONS

Teaching Assistant, Data Structures

Jan 2023 – Present

- Providing one-to-one and small-group academic and advisory support to students with in-class and after-class Q&A sessions
- Explaining the principle of data structure and instructing students to implement the data structure in practice.

Second Prize, National Student Mathematical Modeling Competition

Nov 2022

Second prize, Liyuan Challenge Cup

Dec 2021

Member, College Volunteer Association

Sept 2020 – July 2021

Head Social Practice Branch, Youth League Committee of the College of Computer Science and Software Engineering

Sept 2020 – July 2022

SKILLS&LANGUAGES

Computer: Python(Proficient), MySQL(Proficient), JAVA, C/C++ (Proficient), Tableau, Excel

Languages: Mandarin (native), English (proficient)