**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 Time – Present
* Designed a relational database for a company that keeps track of charity record and donor profiles

**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 condlued 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 202**1*

*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&IANGUAGES**

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

**Languages:** Mandarin (native), English (proficient)