

# Pengcheng Zhang

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## EDUCATION

University of Electronic Science and Technology of China

09/2021 - 06/2025

- **Degree:** Bachelor of Engineering in Computer Science and Technology
- **GPA:** 3.96/4
- **Honor:** National Scholarship, Outstanding Student Scholarship of UESTC
- **Core Modules:** C++ Programming, Data Structures and Algorithms, Computer Architecture, Computer Networks, Principle and Application of Database, Artificial Intelligence, Computer Graphics, Linear Algebra and Space Analytic Geometry, etc.

## RESEARCH EXPERIENCE

Contemporary Undergraduate Mathematical Contest in Modeling

09/2023

**Project:** Automatic Pricing and Replenishment Decisions for Vegetable Products

*Group Leader | University of Electronic Science and Technology of China | Instructor: Professor Li Liang*

- Analyzed years of product sales data and resolved three key questions: understanding sales distribution among various vegetable categories, examining the relationship between sales volume and pricing, and devising optimal restocking and pricing strategies for a supermarket
- Cleaned and pre-processed tens of thousands of data points, including outlier detection, imputing missing data, etc.
- Calculated Pearson correlation coefficients and performed regression fitting to determine relationships; used Tableau for data visualization, such as heat maps, frequency plots, distribution plots, and regression fit plots
- Used the ARIMA model to forecast baseline sales, applied SVR regression to determine relationship between sales and pricing, established a linear programming model and designed a simulated annealing algorithm in MATLAB for optimization
- Composed a nearly 30-page paper and achieved the **First Prize** in the Sichuan Division of Contemporary Undergraduate Mathematical Contest in Modeling

NUS School of Computing Summer Workshop

05/2023-07/2023

**Project:** Big Data Analytics and Visualization

*Group Leader | School of Computing, National University of Singapore | Instructor: Professor Danny Poo*

- Acquired a large real estate dataset from Kaggle with over 300,000 records and used various data analysis methods to analyze Beijing house price changes over the past decade, and provided guidance for investment companies
- Cleaned and preprocessed the data, including outlier detection, imputing missing values, and variance testing
- Utilized data science algorithms for analysis, implemented Principal Component Analysis (PCA), Cluster Analysis, Support Vector Machines (SVM), and other methods in Python to analyze the data and extract underlying features
- Visualized the data using Tableau for better organization and storytelling of the analysis findings
- Achieved **A** in the final assessment

Research on personalized recommendation combined with large language model

04/2024-07/2024

*Researcher Intern | University of Electronic Science and Technology of China | Instructor: Professor Yang Bo*

- Learnt traditional recommendation models and algorithms (such as collaborative filtering, graph neural networks, etc.); search and read papers in the related fields
- Studied the structure of the Transformer model, learnt and investigated the current research status of large language models
- Assisted senior students in designing prompts and run the large language model; tried to achieve better integration between the large language model and traditional recommendation models at the embedding level (such as embedding traditional collaborative information into LLM, etc.)
- Conducted research status of recommendation for large language models, summarized new developments and ideas; gave report at the group meeting

## HONORS AND AWARDS

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- National Scholarship (Ministry of Education of the People's Republic of China) 12/2022
- Outstanding Student Scholarship of UESTC 12/2022
- Model Student Scholarship of UESTC 11/2023
- First Prize of Contemporary Undergraduate Mathematical Contest in Modeling (Sichuan, China) 10/2023
- Second Prize in the "Shanshu Cup" Mathematical Modeling Elite Competition 09/2023
- Outstanding Participant of the Freshmen Elite Training Camp (UESTC) 05/2022

## EXTRACURRICULAR ACTIVITY

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**Member of the Maker Center (Association for Science and Technology) at the UESTC** 09/2021-09/2024

- Organized lectures and training on technological innovation
- Responsible for reviewing the electronic design competition

**Student Development Guidance Center, School of Computer Science** 09/2022-09/2023

- Served as the assistant of the center, organized and planned academic forums, overseas study seminars, and cultural events such as "Young Voices of UESTC" multiple times

**Commissary in Charge of Studies** 09/2021-09/2022

- Responsible for the daily academic affairs of the class and organizing study activities
- Acted as a student representative in teacher-student meetings and collected feedback from students

**Elite Training Camp for Freshmen at the UESTC** 10/2021-05/2022

- Served as Academic Affairs Representative and took responsibility for organizing academic activities within the class
- Recognized as an outstanding camp member

## OTHER INFORMATION

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- **Language Proficiency:** English (Proficient: IELTS Overall 7.0); Chinese (Native Speaker)
- **Other Skills:** Python, SQL, C++ programming languages; with an understanding of the Transformer architecture
- **Hobby:** playing guitar, badminton, basketball, billiards, and table tennis; swimming, drawing, photography, etc.



电子科技大学本科学生成绩单

Official Undergraduate Transcript of  
University of Electronic Science and Technology of China

NO.2006,Xiyuan Ave,  
West Hi-tech Zone  
Chengdu,Sichuan 611731  
P.R.China

Name:Zhang PengchengStudent ID:2021060904009Gender:Male

Date of Birth:2002-09-06Date of Enrollment:2021-08-26Duration:4 Years

School:School of Computer Science & Engineering (School of Cybersecurity)Major:Computer Science and Technology

Compulsory Courses									
Courses	Term	Credit	Score	GP	Courses	Term	Credit	Score	GP
C Language	2021-2022-1	2	90	4.0	Military Theory	2021-2022-1	2	90	4.0
Military Training	2021-2022-1	2	P	4.0	basketballA	2021-2022-1	1	98	4.0
Appreciation of Human Civilization	2021-2022-1	1	A	4.0	Ideology and morality and the rule of law	2021-2022-1	3	86	4.0
College English (Intermediate)	2021-2022-1	4	91	4.0	Calculus I	2021-2022-1	6	92	4.0
Linear Algebra and Space Analytic Geometry I	2021-2022-1	4	96	4.0	mental health and the ability of innovation	2021-2022-1	2	94	4.0
Charm automation: entry and innovation	2021-2022-1	1	90	4.0	ACM-ICPC Algorithm and Program Design	2021-2022-2	2	82	3.7
The Rise and Fall of Great Countries	2021-2022-2	2	91	4.0	Physics I	2021-2022-2	4	97	4.0
Circuit Analysis and Electronic Circuits	2021-2022-2	5	97	4.0	Table tennis B	2021-2022-2	1	100	4.0
Calculus II	2021-2022-2	5	90	4.0	Intermediate English Speaking	2021-2022-2	2	90	4.0
Design of intelligent tracking and obstacle avoidance car (PBL-F)	2021-2022-2	1	90	4.0	Special Lecture on the Historiography in the Communist Party of China	2021-2022-2	1	91	4.0
The Summary of Chinese Modern History	2021-2022-2	3	90	4.0	The C++ Programming	2022-2023-1	2	77	3.2
Physics II	2022-2023-1	4	81	3.6	Electrical Assembly Practice	2022-2023-1	1	98	4.0
Probability and Mathematical Statistics	2022-2023-1	3.5	85	4.0	Introduction of Computer	2022-2023-1	1	94	4.0
Computer Graphics	2022-2023-1	3	92	4.0	gym fitness C	2022-2023-1	1	93	4.0
Data Structure and Algorithm	2022-2023-1	3.5	83	3.8	Digital Logic	2022-2023-1	3.5	97	4.0
Experiments of Digital Logic	2022-2023-1	1	97	4.0	Comprehensive quality practice I	2022-2023-1	1	99	4.0
Computer Networks	2022-2023-2	3	88	4.0	Principles of Computer Organization	2022-2023-2	3.5	90	4.0
Comprehensive Experiment of Computer Organization Principle	2022-2023-2	1	93	4.0	English for Science and Technology Communication	2022-2023-2	2	87	4.0
Discrete Mathematics	2022-2023-2	3.5	87	4.0	Principle and Application of Database	2022-2023-2	3	92	4.0
Engineering Internship	2022-2023-2	2	A	4.0	Comprehensive Design	2022-2023-2	1	98	4.0

Office of Academic Affairs  
UESTC

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