

Tengxiang LIN

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Education

South China University of Technology

Guangzhou, Guangdong

B.Eng in Information Engineering

Sept 2019 - July 2023

- **Relevant Courses:** Signals and Systems, Linear Algebra, Probability Theory and Mathematical Statistics, Analog Electronic Circuits, Digital Electronic Circuits.
- **GPA:** 3.32/4.0

Project Experiences

Optimal Resource Pooling in Communication Networks

Jan 2022 - Jul 2022

- Collaborated with an MIT PhD candidate to conduct research on optimal resource pooling in communication networks.
- Continuously improved and optimized resource pooling algorithms, and used the Ford-Fulkerson algorithm to compute the optimal pooling scheme for one-to-one transmission networks.
- Demonstrated that the weight-to-zero algorithm outperforms the naive algorithm, and evaluated the effectiveness of the algorithm using Python simulations.
- **Technical Skills:** Python, LaTeX.
- **Soft Skills:** Collaboration, Literature Review, Algorithm Optimization, Research Evaluation.

Development of "Southern Cat" Social Platform

Mar 2022 - Jun 2022

- **Technical Skills:** Java, Android Development, IntelliJ IDEA.
- **Soft Skills:** Team Leadership, Communication, Project Management, Problem Solving.

Research on Unmanned Shopping Visual Recognition System

Feb 2023 - Present

- Built a complete commodity dataset to support the unmanned shopping visual recognition system and implemented a target detection model based on the YOLOv5s model, which was evaluated.
- Developed an intelligent vending machine system on an Android development board, which has practical value.
- Expected outcomes include improving the accuracy and real-time performance of the unmanned shopping visual recognition system, and providing more efficient, convenient, and secure solutions for the unmanned shopping industry.
- **Technical Skills:** Python, YOLOv5s, Android development, Computer Vision.
- **Soft Skills:** Data collection and management, Problem solving, Critical thinking, Communication.

Achievements

2022 **National Encouragement Scholarship**, Undergraduate Comprehensive Assessment

2022 **First Prize**, 14th National College Student Mathematical Contest

2021 **Third Prize**, 13th National College Student Mathematical Contest

2021 **Third Prize**, National College Student Mathematical Modeling Competition

Skills

Programming C/C++, Python, Java, MATLAB.

Miscellaneous Android Studio, \LaTeX .

Languages English, Chinese, Chaoshan dialect.

References available upon request.