# Linsen Gao

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#### Education

University of Waterloo

Sep 2024 - Present

Master of Engineering - Electrical and Computer Engineering

Waterloo, Canada

Nanjing University of Posts and Telecommunications

Sep 2020 - Jun 2024

Bachelor of Engineering - Telecommunication Engineering (GPA: 90.06/100, TOP 6.7%)

Nanjing, China

# Skills

Programming Language: Python, MATLAB, C, Verilog, Java

Language: Mandarin(native), English(proficient)

# Research

#### SA-CNN Emotional Detection System for Facial Expression

Jan 2024 - Jun 2024

Supervised by Prof. Minghai Xu

Nangjing, China

- Integrated convolutional neural networks (CNN) with self-attention mechanisms to enhance model performance, achieving an overall system accuracy rate of 85%
- Implemented a YOLO-based model for precise face detection to accurately isolate faces from images in various environments

# EEG/EMG-based Emergency Brake Prediction

Jan 2022 - Jun 2022

Supervised by Prof. Liya Huang

Nangjing, China

- Collaborated with a cross-disciplinary team to integrate multiple data sources, including an EEG cap, smartphone accelerometer, and a homemade FPGA for muscle contraction testing
- Implemented a weighted fusion algorithm by using multiple data sources to predict final results, showcasing proficiency in algorithm development and integration
- Awarded 2023 Outstanding Conclusion of Student Innovation and Entrepreneurship Project (TOP 1%)

### Experience

# Software Engineering Intern at ENN Group

Jul 2023 - Sep 2023

Nanjing, China

- GPT Collaborative Knowledge Base Module for Enhanced Q&A
- Independently trained Transformer-based model for one of China's largest energy companies • Achieved 90% answer accuracy rate for company's confidential proprietary knowledge base
- Integrated deployed model with company's internal messaging platform

#### Project

### Word Guessing Game Development

Sep 2021 - Oct 2021

- Developed an interactive word guessing game in C
- Developed a character matching algorithm that updates correct guesses and tracks errors in a word guessing game, with random word selection and limited attempts
- Implemented file I/O for persistent player rankings

## Android Timetable Design App Development

Nov 2023 - Dec 2023

- Developed application logic for course scheduling and instructor details
- Designed a user-friendly interface using XML
- Integrated SQLite for persistent data storage, ensuring data security and reliability

#### Awards

Outstanding Conclusion of Student Innovation and Entrepreneurship Project (TOP 1%)	May 2023
School-level first-class scholarship (TOP 5%)	Jun 2024
School Class Club Contribution Award	Sep 2021
The Second Prize of Electronic Design Contest for College Students (TOP 5%)	Jan 2021
Provincial Second Prize in Advanced Mathematics Contest (TOP 5%)	May 2021