# **Zhenglang Weng**

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# **EDUCATION**

# University of Science and Technology of China (USTC)

Hefei, Anhui, China Sep. 2022 – Present

School of the Gifted Young, Junior Year

- Major: Electronic Information Engineering Overall GPA: 4.04/4.3 Ranking: 1/149
- Standardized Test: TOEFL:111 (Reading: 30, Listening: 30, Speaking: 23, Writing: 28)

#### PROJECT EXPERIENCES

# A Software Defined Radio System for 5G PUSCH<sup>1</sup>

Advisor: Prof. Wuyang Zhou, Prof. Puhua Zhang | Course Project for Principles of Communications

Dec. 2024

- Accomplished modules using MATLAB, including QAM, Scrambling/Descrambling, OFDM, CRC, Channel Estimation.
- Constructed a simulated channel using MATLAB and a real channel using an RF antenna.
- Validated the code operation through various channels, focusing on Error Correction, Channel Estimation, and Equalization.

# Simplified 8-bit CPU Based on FPGA

Advisor: Prof. Xiaowen Liang | Course Project for Electronic System Design

Nov. 2024

- Designed an 8-bit Instruction Set of basic operations, including move, jump, basic computation, condition, immediate number.
- Implemented the self-designed Instruction Set using Verilog HDL, and verified the basic function of the CPU using peripheral interfaces on an experiment circuit board.

## Automatic Routing Gluttonous Snake Program Based on BFS Algorithm

Advisor: Dr. Linlin Qin Course Project for Computer Programming A

Nov. 2022

- Designed and implemented a program of the classical game Gluttonous Snake.
- Established a program that can automatically lead the snake to eat most of the apples without dying, using the basic algorithm of Breadth First Search (BFS).

## **HONORS AND AWARDS**

Outstanding Undergraduate Scholarship-Gold Prize (Top 3%)	Nov. 2024
Scholarship Issued by JAC&NIO Enterprise (Top 2%, 5000 CNY)   USTC	Nov. 2023
CUMCM <sup>2</sup> (1st in Anhui Province, Second Prize National)   China	Dec. 2023
Robogame Robot Championship (Second Prize)   USTC	Nov. 2023

## TEACHING EXPERIENCES

# **Teaching Assistant for Computer Programming A**

Fall, 2024

- Conducted exercise sessions for students and assisted them in exam preparation.
- Utilized an online openjudge platform to facilitate program assessments.

## **SKILLS**

**Programming Language:** C, C++, MATLAB, Mathematica, Python, Verilog HDL, Markdown, LaTeX

**Software:** Sketchpad, GeoGebra, SolidWorks

Hardware: Heat gun, Soldering station, PPG, EDFA, Optical Attenuator, Optical Fibre

## LEADERSHIP & EXTRACURRICULAR ACTIVITIES

**Class Representative for Academics** 

Member of the USTC Ballroom Dance Association

Volunteer of the USTC Science and Technology Opening Week (2023&2024)

<sup>&</sup>lt;sup>1</sup>Physical Uplink Shared Channel

<sup>&</sup>lt;sup>2</sup>Contemporary Undergraduate Mathematical Contest in Modeling