HSI-KUANGYU

CONTACT

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AUTOBIOGRAPHY

My name is HSI-KUANGYU, raised in Beijing, where I completed my junior and senior high school education at the Capital Normal University High School. I excelled in mathematics and physics, consistently ranking first in my school. In 2018, I competed in multiple contests, earning the Second Prize in the Beijing Mathematics Competition, the Second Prize in the Beijing Physics Competition, and the First Prize in the Beijing Mathematical Modeling Contest. In the 2019 Beijing municipal standardized exams, I ranked 18th in mathematics and 41st in physics district-wide.

In 2020, I passed the Joint Entrance Examination for Hong Kong, Macao, and Taiwan students, administered by Guangdong Province, and enrolled at Northwestern Polytechnical University (NPU) in Xi'an for further studies. At NPU, I engaged with exceptional peers, including my roommate, a 15-year-old top student from Huazhong University of Science and Technology's Youth Class, whose innovative approaches to mathematics and programming broadened my perspective. Initially, my academic performance lagged, but in my sophomore year, I took Principles of Automatic Control and discovered a strong aptitude for the subject, achieving a top 50% departmental ranking for the first time. This experience sparked my passion for control theory. Subsequently, I systematically pursued advanced control theory courses, stabilizing my ranking within the top 60% of my department during my junior and senior years. For my capstone project, I authored a thesis summarizing my research, demonstrating my technical growth. This journey clarified my strengths and shaped my ambitions.

Moving forward, I aim to leverage my expertise in control theory to advance robotics, focusing on intelligent systems and practical applications, and contributing to technological innovation through rigorous study and hands-on experience.

EDUCATION

Northwestern Polytechnical University（Xi'an） | 2020-2024

- Flight Control Major, School of Automation
- Main Player, First Tier of the School Tennis Team
- National College Tennis Championship Singles Top 32

Capital Normal University High School（Beijing）| 2017-2020

- Second Prize of the Beijing Mathematics Competition
- Second Prize of the Beijing Physics Competition
- First Prize of the Beijing Mathematical Modeling Contest

PROJECTS

A Simple Calculator Based on STM32F103C8

- Implemented addition, subtraction, multiplication, and division operations using a 4x4 keypad for input
- Displayed calculation results on the LCD.

Controlling DC Motor Speed Using STM32F103

- The controller generates PWM pulses, which are sent to the motor driver circuit and amplified to control the speed of the DC motor.
- After PID computation, the duty cycle of the PWM pulses is adjusted to achieve real-time speed control.

Design and Simulation of a Flight Control System Based on Adaptive PID Method

- Modeling of a Quadrotor Aircraft
- Controller Design and Simulation
- Authored a research paper (see attachment).

TECHNICAL SKILLS

Keil v5

- Simple Calculator
- Motor Speed Control

Matlab

- Control System Simulation
- System Identification
- Image Processing

C#

- Image Processing

SolidWorks

- Mechanical Drafting

INTERESTS

Tennis

- 4th Place, Team Event, 2023 National College Tennis Championship (Northwest Division), Xi'an Jiaotong University
- Round of 32, Singles, 2023 National College Tennis Championship Finals, Sichuan University of Science & Engineering
- 7th Place, Team Event, 2024 National College Tennis Championship (Northwest Division), Zhengzhou University.