Jiahe Dou

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EDUCATIONAL BACKGROUND

Huazhong University of Science and Technology   Sept.2021--Jun.2025(expected)
Bachelor of Engineering
Cumulative Average Grade:92.1
Rank:2/123
Major: Electronics and Information Engineering   **Track:** Space Communications
Core Modules: Signal and Linear System, Principle of Communication, etc.

RESEARCH EXPERIENCES

Towards Vehicle-to-everything Autonomous Driving: Collaborative Perception   Sept.2023 – Present
Research Assistant (Supervisor: Prof. Wei Wang)
- Applied advanced knowledge in deep learning, vehicle networking, and collaborative perception to enhance autonomous driving systems.(based on Pytorch framework)
- Surveyed a pioneering initiative using Convolutional Neural Networks (CNN) to significantly enhance the accuracy and reliability of Collaborative Perception systems in dynamic environments.

Control Method of Holographic Beamforming Antenna Array   Sept.2022 – May.2023
Research Assistant at MCSP Lab (Supervisor: Prof. Haifan Yin)
- Developed expertise in holographic MIMO channel perception and advanced beamforming techniques.
- Innovated a novel control method for holographic beamforming antenna arrays, integrating IoT technology for more efficient and precise system regulation.
- **Patent:** *A holographic beamforming antenna array control system and method based on the IoT*

PROJECTS EXPERIENCES

Intelligent 5G Signal Enhancement System   Sept.2022--Nov.2023
Team Member & Algorithm Developer
- Developed high-performance holographic beamforming array using high-frequency composite structure. Innovated holographic channel perception and beamforming technology. Designed interference suppression algorithm leveraging sparse structure of wireless channels.
- Reduced the system's costs by nearly 90%, power consumption by nearly 80%, and coverage distance by 10 times compared with 5G blind small base stations. (been highly praised by *China Mobile Group*)
- Won the Golden Prize in the 9th China International College Students' "Internet+" Innovation and Entrepreneurship Competition

HONOURS & COMPETITION AWARDS

- **National scholarship (twice)**   Oct.2022&Oct.2023
- The China International College Students' Innovation Competition (*Golden Prize:Top 0.01%*)   Nov.2023
- The 10th "Datang Cup" National College Student Competition (*1st Prize:Top 1%*)   Jun.2023
- The China Collegiate Algorithm Design & Programming Challenge Contest (*1st Prize:Top 5%*)   Apr.2022
- The China Mathematics Competitions (*2nd Prize:Top 17%*)   Oct.2022
- The China Undergraduate Mathematical Contest in Modelling (*2nd Prize: Top 17%*)   Sept.2023
- The Outstanding Undergraduates in Term of Academic Performance   Dec.2022

SKILLS

Programming Skills & Language Performance
- Python(Proficient), Java, C;
- English (CET4, CET6), Chinese (mother tongue)