# Dinghan Wang

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#### Education

#### Northwestern Polytechnical University, Shaanxi, China

Sep 2022 - Present

M.Eng. System Engineering

90/100 CGPA

- Postgraduate recommendation
- Research interests: Deep Reinforcement Learning, Computer Vision, Intelligent Systems, UAV, Control Systems, Game Theory

#### Northwestern Polytechnical University, Shaanxi, China

Sep 2018 - Jun 2022

3.46/4 GPA, 10/65 RANK

B.Eng. Detection, Guidance and Control Technology

- Distinguished Graduate
- Outstanding Graduation Project
- Full marks in Theoretical Mechanics, Principle of Automatic Control I and Computational Methods courses.

#### **Publications**

- Jiandong Zhang, **Dinghan Wang**, Qiming Yang, Zhuoyong Shi, Longmeng Ji, Guoqing Shi, Yong Wu. Loyal wingman task execution for future aerial combat: A hierarchical prior-based reinforcement learning approach[J]. Chinese Journal of Aeronautics. (co-first author), SCI JCR Q1 STATUS: online
- Xiaoyang Li, Teng Wang\*, **Dinghan Wang\***, Hairuo Zhang, Ying Zhou, Deyun Zhou. Intelligent Decision-Making Algorithm for Airborne Phased Array Radar Search Tasks Based on a Hierarchical Strategy Framework[J]. Chinese Journal of Aeronautics. (co-correspondence author), SCI JCR Q1 STATUS: initial accept
- Dinghan Wang, Longmeng Ji, Jingbo Wang, Zhuoyong Shi, Jiandong Zhang, Qiming Yang, Guoqing Shi, Yong Wu, Yan Zhu, Jinwen Hu. Dogfight Advantage Occupancy Method Based on Imperfect Information Self-play[C]. IEEE ICCA 2024. (first author), STATUS: accept
- Dinghan Wang, Jiandong Zhang, Qiming Yang\*, Jieling Liu, Guoqing Shi, Yaozhong Zhang. An Autonomous Attack Decision-Making Method Based on Hierarchical Virtual Bayesian Reinforcement Learning[J]. IEEE Transactions on Aerospace and Electronic Systems. (co-first author), SCI JCR Q1 TOP STATUS: major revision
- Zhuoyong Shi, Yetao Jia, Yong Wu, Kexin Zhang, Longmeng Ji, **Dinghan Wang**. Design of motor skill recognition and hierarchical evaluation system for table tennis players[J]. IEEE Sensors Journal. **SCI JCR Q1 STATUS: published**
- Zhuoyong Shi, Jiandong Zhang, Guoqing Shi, Longmeng Ji, **Dinghan Wang**, Yong Wu. Design of UAV Flight State Recognition System for Multi-sensor Data Fusion[J]. IEEE Sensors Journal. **SCI JCR Q1 STATUS: initial accept**
- Zhuoyong Shi, Liuming Yang, Yong Wu, **Dinghan Wang**, JianDong Zhang, Anli Zhang. Design of motion pattern recognition system based on artificial intelligence methods[C]. IEEE ICCSI. **STATUS: published**
- Zhuoyong Shi, Mingyang Liu, Qiming Yang, Jieling Liu, **Dinghan Wang**, Jiandong Zhang. Autonomous Security Evaluation Model for UAV Based on Airborne Information[C]. IEEE ICICSP. **STATUS: published**

#### **Projects**

## The Key R&D Projects in Shaanxi Province (No.2022GY-089)

Sep. 2022 - Present

 $Multimodal\ Recognition,\ Situational\ Awareness\ (Student\ Leader)$ 

The Natural Science Basic Research Program of Shaanxi (No.2022J0-593)

Jun.2022 -Jan. 2024

Reinforcement learning: Intelligent Decision Making (Student Leader)

# Technical Skills

Languages: Python, C, C++ Frontend: HTML, CSS, JavaScript

Clouds & Databases: MySQL, Tencent Cloud, Ali Cloud, Azure Cloud

Web Technologies: Docker, NAT(v4&v6), Nginx, HTTP, SSL

Operating Systems: Windows, Debian, Ubuntu, MacOS, OpenWRT, Proxmox VE

Tools: PyTorch, OpenCV, OpenDDS, Git, Vim

## Honours and Awards

National Graduate Student Electronic Design Competition Northwestern Regional First Prize, Team Award (Team Leader)	Aug 2023
National Graduate Student Electronic Design Competition (Business Track) Northwestern Regional Third Prize, Team Award	Aug 2023
National College Students' Innovation and Entrepreneurship Training Program Third Prize, Team Award (Team leader)	Jun 2022
Distinguished Graduate	Jun 2022
Outstanding Graduation Project	AY 2020 - 2021

AY 2019 - 2021

# Experience

# **Academic Expeditions**

- 2023 Future AI Masters and Global IT Training Camp
- Member of the Mathematics Modeling Association

#### Community Involvement

- Served as a distinguished undergraduate representative, sharing academic and graduate application experiences with fellow undergraduates.
- Shared experiences as a senior student in university career planning courses.

Scholarship from the School of Electronic Information (Twice)

- Acted as a mental health committee member during both undergraduate and master's studies, organizing psychological counseling activities during the pandemic.
- Volunteered as a material transporter during the pandemic.