Dinghan Wang

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Education

Northwestern Polytechnical University, Shaanxi, China **Sep 2022 - Present**

M.Eng. System Engineering *90.19/100 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**

B.Eng. Detection,Guidance and Control Technology *3.46/4 GPA, 10/65 RANK*

- 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 DOI: 10.1016/j.cja.2024.03.009**
- 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. **(highlight article, co-correspondence author), SCI JCR Q1 DOI: 10.1016/j.cja.2024.09.006**
- **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), DOI: 10.1109/ICCA62789.2024.10591896**
- **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 DOI: 10.1109/TAES.2024.3410249**
- 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 DOI: 10.1109/JSEN.2023.3346880**
- Zhuoyong Shi, Guoqing Shi, Jiandong Zhang, **Dinghan Wang**, Tianyue Xu, Longmeng Ji, Yong Wu. Design of UAV Flight State Recognition System for Multi-sensor Data Fusion[J]. IEEE Sensors Journal. **SCI JCR Q1 DOI: 10.1109/JSEN.2024.3394883**
- 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. **DOI: 10.1109/ICCSI58851.2023.10303805**
- 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. **DOI: 10.1109/ICICSP59554.2023.10390620**

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 **Aug 2024**
Northwestern Regional Second Prize, Team Award (Team Leader)

MathorCup University Mathematical Modeling Challenge (Big Data Competition) **Dec 2023**
Third Prize, Team Award (Team Leader)

National Graduate Student Electronic Design Competition **Aug 2023**
Northwestern Regional First Prize, Team Award (Team Leader)

National Graduate Student Electronic Design Competition (Business Track) **Aug 2023**
Northwestern Regional Third Prize, Team Award

National College Students' Innovation and Entrepreneurship Training Program **Jun 2022**
Third Prize, Team Award (Team leader)

Distinguished Graduate **Jun 2022**

Outstanding Graduation Project **AY 2020 - 2021**

Scholarship from the School of Electronic Information (Twice) **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.
- 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.