

WU Hao

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EDUCATION

Beijing Institute of Technology (BIT), Beijing, China 985 211 Double 1st-Class	Sep 2019 - Jun 2024
Bachelor of Science in Mechatronical Engineering	
Total GPA: 2.9/4.0	
Major in Mechatronical Electronic Engineering of Robotics (changed)	Sep 2021-Jun 2024
GPA:3.5/4.0	
*Initially majored in Intelligent Electromechanical(weapon) System	Sep 2019-Aug 2021
GRE Score: VerbalReasoning: 159/80% QuantitativeReasoning: 169/96% AW: 3.0/16% Total:328/340	

RESEARCH EXPERIENCE

Organoid Intelligence, at Eastern Institute of Technology in Academician JIN Dayong Group	Mar 2025 - Present
Core Member & Data Analysis Engineer	Ningbo
<ul style="list-style-type: none">• Analysis of various types of data in the direction of organoid intelligence• Experimental design and experiments in organoid intelligence training	
UAV and UGV Delivery Collaboration in Low-altitude Economy, at PolyU AAE AIMS Group	Sep 2024 - Mar 2025
UGV Project Leader	Hong Kong
<ul style="list-style-type: none">• Mechanical design and manufacturing of UGV• Electronic control design	
Research of Quadrotor UAVs Path Planning, at Beijing Institute of Technology	Jan 2024 - Jun 2024
Project Leader	Beijing
<ul style="list-style-type: none">• Enhanced UAV obstacle detection and avoidance using optimal A* Algorithm• Made use of skills such as SIGMA Free, ROS, Gazebo to achieve predictive experiment results	
Multi-Modal Quadruped Robot	Sep 2023 - Jan 2024
Core Participant	Beijing
<ul style="list-style-type: none">• Was responsible for remote control and mechanical structure debugging	
Cloud Shaped Floating Intelligent Companion Robot	Feb 2023 - Jul 2023
Project Leader	Beijing
<ul style="list-style-type: none">• Was responsible for mechanical structure debugging• Utilized STM32 for object detection, employed Bluetooth beacons for ranging and positioning• contributed to programming on the Raspberry Pi platform• Project report and post	
Image Recognition of Specific Ancient Coin Text Type	Dec 2022 - Mar 2023
Project Leader	Beijing
<ul style="list-style-type: none">• Developed recognition of different versions of characters for Daguan Tongbao (Ten Cents)• Proposed the project ideas and followed up, including literature research, market investigation, mentors identifying and recruiting partners, patent application etc• Participated in the image collection, data set establishment, implementation of yolov5 algorithm, Android app production• Acquired the skills such as image recognition, application of yolov5, BiLSTM algorithm etc.• Joined Beijing Institute of Technology "Challenge Cup" Contest and got the award, the achievement won the National Invention Patent as the 1st author (in progress)	
Fall Prediction Based on Plantar Pressure and Attitude Signal	Oct 2022 - Mar 2023
Participant	Beijing
<ul style="list-style-type: none">• Participated in the master students' graduation project, and patent disclosure writing, national invention patent application, the algorithm learning based on deep residual bidirectional LSTM neural network and the plantar pressure detection experiment and data set establishment on this basis• Won a National Invention Patent as the 2nd Author (in progress)	

All-Terrain Spherical Robot with Deformable Structure

Aug 2022 - Sep 2022

Participant

Beijing

- Assisted in the design of deformation structure of the variable spherical robot, completed the structure part of the PowerPoint slides' presentation
- Completed the transplantation of the "origami structure" on the spherical robot, selected the appropriate materials

The Research of 4G Remote Control Vehicle Project

Dec 2021 - Apr 2022

Project Leader

Beijing

- Made mechanical and electrical structure design: upgraded the vehicle door bridges, coupling and counterweight, completed the **3D Simulation** of the vehicle shell
- Achieved the **4G remote control** within 100ms through esp8266 and 4G image transmission within 500ms through online video monitoring platform; Tested the selection of different motors
- Achieved the tasks such as food delivery etc. on complex road through more than 50 times testing
- Managed the whole project's progress, acquired the skills of the PCB design and robots building, learned the application of Webrtc agreement

Computational & Theoretical Chemistry Energetic Windmill

Energetic Materials Member

- Concluded the literature review and completed the draft of the final research paper
- Applied the ChemDraw and other simulation software to simulate and calculate the specific structure of energetic materials
- Published a SCI paper ("Computational and Theoretical Chemistry" *Energetic Windmill: Computational Insight into Guanidine-based Nitroazole-substituted Compounds as Energetic Windmill*) as the author

WORK EXPERIENCE & EXTRACURRICULAR ACTIVITIES

School of Mechanical and Electronic Engineering Office at the BIT

Sep 2023 - Mar 2024

Student Office Assistant

Beijing

- Supported the daily academic affairs in the office
- Helped officers in doing general work such as giving off materials, registering information, etc.

Eastern Institute of Technology Academician JIN Dayong Group

Mar 2025 - Present

Visiting Student & Part-Time Engineer

Ningbo

- Organized Intelligence

Research group of Autonomous and Interactive Mobile Systems (AIMS) at PolyU

Sep 2024 - Feb 2025

Research Technical Assistant, A

Hong Kong

- UAVs Vision, UAV and UGV delivery collaboration

Lab of Intelligent Unmanned Systems at Beijing Institute of Technology

Jun 2024 - Aug 2024

Research Assistant

Beijing

- UAV Path Planning

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Beijing Bowen Kangtai Cultural Relics Company	Apr 2023 - Jun 2024
Chief Numismatist	Beijing & Xuzhou
<ul style="list-style-type: none"> Served as a Chief Numismatist for Chinese Ancient Coins Worked as a Chief Numismatic Advisor 	

International Ballistics Society	Feb 2022 - Present
Student Member,	
<ul style="list-style-type: none"> Participated in the regular meeting and academic seminars of the Society Assisted in the organization of industry events and conferences 	

Siyuan Project	Oct 2019 - Sep 2023
Team Leader	Beijing & Ordos
<ul style="list-style-type: none"> Organized and planned dozens of recruiting and cultural activities, including one marketing event with more than 10,000 participants Produced 3 newsletters, wrote more than 45,000 words articles and collected more than 5GB audio and video data Won one university-level first prize for a team project, one college-level first prize for a team project, one university-level second prize for a team project, and two university-level advanced individual titles 	

Student Union and Students Association Union	
Chief Leader	
<ul style="list-style-type: none"> Was responsible for budget review and approval of all departments, planning and arrangement of activities of all departments, and coordination Operated events and activities organization including multiple university cultural and sports activities Was responsible for affairs of University Broadcasting and Radio Station, and participated in the broadcasting 	

The 32nd Chinese National Chemistry Olympics Competition(CChO)	Sep 2018 - Dec 2018
Brozen Prize Winner	Beijing & Ji-Nan
<ul style="list-style-type: none"> Represented Inner Mongolia Autonomous Region to participate in the 32nd China Chemistry Olympiad and won the third prize (bronze medal) at the national level, and obtained many guaranteed places in 985 universities 	

Chinese Ancient Coins Collection and Business	
Attendant	
<ul style="list-style-type: none"> Shared personal collection, Ordos area museum coin appraisal, consultant and appraiser for the coin rating companies 	

HONORS & AWARDS

Bronze Medal, The 32nd Chinese National Chemistry Olympics Competition	Dec-2018
Bronze Prize, Beijing Institute of Technology "Challenge Cup" Contest	July-2022
College-leveled Subject Competition Excellent Mention	Sep-2020, Oct-2020, April-2022& Nov-2022
Honor of "Advanced Individual Title", Beijing Institute of Technology	Oct-2020, Nov-2020 & May-2021
College-leveled Outstanding Group Award at the BIT	May-2020, Sep-2020 & Nov-2020
First Prize, College-leveled "Century Cup" Competition at the BIT	July-2020

PRIZE and HONOR

- Skills:**Microsoft office, C, Matlab, Python, Raspberry Pi, SolidWorks, Yolo, Arduino, STM32, SIGMA Free etc.
- Language Proficiency**Mandarin (native), English (well)
- Interests::** Collecting ancient Chinese coins, Organizing students' activities, Broadcasting,Sports.