Xiong, Junyan

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EDUCATION BACKGROUND

Northwestern Polytechnical University (Project 985 & 211 in China) ***Xi'an, China***

Bachelor of Engineering in Mechanical Engineering (**Overall Grade: 90.61/100**) *Aug. 2017 - July. 2021*

- Honour: National Scholarship *(National Level: Top 0.2%)*
  Outstanding Undergraduate Student *(Undergraduate Level: Top 5%) in 2018, 2019, 2020*
- Courses: Linear Algebra (99/100), Mechanical Surveying and Mapping (95/100), Introduction to Mechatronics (95/100), Fundamentals of Machine Design (95/100), Principle of Automatic Control (90/100)

RWTH Aachen University ***Aachen, Germany***

Summer School in Production Technology meets Industry 4.0 *August 2019*

- Courses: Introduction "Internet of Production", Smart Analytic & Data Integration, Assembly Robotics and Smart Automation, Mobile Robots for Flexible Intralogistics, Self-Optimized Machines and Human-Machine Interaction

RESEARCH EXPERIENCE & EXTRACURRICULAR ACTIVITIES

Design and Manufacture of Lightweight Service Robot ***Xi'an, China***

Project Leader *Sept. 2018 - Jan. 2019*

- Designed and manufactured a multi-axial robot with a moving base and a three-link flexible arm, which gave the robot abilities to pick up and deliver items all operated on smarts phones;
- Individually completed the 3D modeling of the whole system, and participated in design of dynamic system, which mainly had Arduino Mega 2560 as the control circuit board, Lx-16a steering gear with angle feedback and HC06 Bluetooth module installed to fulfill the designed functions.

Intelligent Aircraft Assembly Storage Box ***Xi'an, China***

Project Leader *Mar. 2019 - Jun. 2019*

- Designed and manufactured a multi-projector camera system to guide the fastener installation process to solve the problems of difficulty and low efficiency in the aircraft assembly process;
- Self-learned MCU and MATLAB Simulink, which were later applied in the project to enable other functions as well as algorithm simulations;
- Enabled the storage box to have functions of QR code configuration, OLED display, real-time positioning by gravity sensors and wireless communication via WIFI module.

Design of Belt Conveyor Transmission Device ***Xi'an, China***

Project Member *Aug. 2020 - Nov. 2020*

- Designed a belt conveyor transmission device with all components selected through detailed calculation;
- Designed and simulated the dynamic system including motor, gear and bearing etc, which were proved plausible in simulation.

COMPETITIONS AND AWARDS

2018 National Contemporary Undergraduate Mathematical Contest in Modeling ***Xi'an, China***

Second Grade Prize in Undergraduate Division *Oct. 2018*

- Investigated and initiated a research on the topic of *Clothing Design for High Temperature Operation.* The design was mainly based on unstable heat conduction modeling, inverse problem of textile material design and material thickness optimization;
- Set up and solved the design model, as well as verified the plausibility of the design in ANSYS.

2018 Northwestern Polytechnical University Mathematics Modeling Competition ***Xi'an, China***

First Grade Prize *Jun. 2018*

- Investigated and initiated a research on the topic of *The Analysis of Return and Risk in Stock Investment*.
- Developed a return and risk model based on opening price, highest price, lowest price, closing price, daily trading volume and total transactions. Imported the model into MATLAB and displayed the relationship between return/risk and daily stock market parameters;
- Obtained the qualification for national mathematics modeling competition.

2018 National College Student English Competition ***Xi'an, China***

Third Grade Prize *Mar. 2018*

- Appraised through comparison of vocabulary, reading and listening abilities in English between contestants.

SKILLS & INTERESTS

- Computer Skills : Unigraphics NX, Auto CAD, Solidworks, ANSYS, C Language, Python, MATLAB
- Languages: Native in Mandarin, Proficient in English (IELTS 7.0)
- Hobbies and Interests: Chinese Calligraphy, Piano