hu xiuyu

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Education

Sept 2017 - Jun 2021
Institute of Mechanics, Chinese Academy of Sciences — **Mechanical engineering（Master）**

- GPA:3.5/4.0

Sept 2013 - Jun 2017
Northeastern University, Shenyang — **Engineering Mechanics （Bachelor）**

- GPA:3.1/4.0

Work experience

Oct 2021 - May 2022 — **Free Consultant**

1.Technical implementation related to automation and robotics, including robot working system simulation, robot modeling and programming, automation equipment design and selection
2. Investigation of industrialization status, identification and feasibility analysis of innovation area.

Jul 2021 - Sept 2022
Institute of Mechanics，UCAS — **Research Assistant**

1.Identify innovative fields of lattice by literature research
2.Support group research through theoretical analysis, modeling and experimental methods

Dec 2021 - Jan 2022
INET of Tsinghua — **Engineer**

Project experience

Oct 2021 - May 2022
Robot system simulation — **Team leader**

1.Build the PCB special-shaped plug-in workstation including path planning, modeling, programming, signal processing and SMART components by Robotstudio.
2.Established the Multi-robot cooperation, spraying and palletizing workstation by Robotstudio.
3.Summarized the method to establish workstations by Robotstudio.

Oct 2021 - May 2022
Robot design — **Team member**

1.By using Solidworks, ABB robot is modeled followed by following three view drawing
2.By using simulink of matlab, carry out the simulation of six-axis robot.
3.By using robotics of matlab, solve the working parameters, trajectory tracking and control of robot.

May 2021 - May 2022

Industrialization survey, innovation identification and feasibility analysis **Main writer**

1.Investigate the current status and trend of industrialization in Hong Kong
2.Identification for the parts which could be improved and innovated by robot in production process of food and metal industries. The general application scenario of robot are also summarized.
3.Application scenario analysis of new technology including AI, 3-D priting.

Jun 2019 - Jun 2021

Analysis and design of lattice plate **Team members**

1.The idea of the combination of 3-D printing and snap-fitted is proposed by me(not the first author).
2.Responsible for the idea, process flow and force analysis of lattice structure of multistage controlled progressive energy absorption(not the first author).
3.Summarize the design principle of preventing the failure of lattice plate by force, summarize formula of mechanical optimization direction(first author of 2 SCI papers).

Sept 2021 - May 2022

AI Industrial visual **learner**

By using the tensorflow, the programs for target identification, object location and defect identification are designed

Jan 2022 - May 2022

Automation of modeling and selection **Engineer**

1.Process modeling and force analysis of the whole structure by using Solidworks and Abaqus.
2.Analysis of movement types workshops need, Selection calculation of transmission and drive equipment

Skills

All have relevant project experience:
1.Programing: Proficient in using Python(tensorflow), Matlab(robotics, simulink),Rapid,C++
2.Modeling: Proficient in using Abaqus, Solidworks,Robotstudio
3.English Writing: 2 SCI papers

Self-evaluation

All evaluation have relevant project experience:
1.Proficient in applying different types programming (Python,Matlab,Rapid,C++) , tool (Solidworks, Abaqus, Robotstudio), English writing(2 sci papers).
2.Strong self-learning ability and interest：All the knowledge system of AI and robot is built by self-learning.
3.Strong ability of innovation identification, feasibility analysis and implementation:(1) Relevant project experience of innovation from theory, simulation to experiment.(2) Research and feasibility analysis reports also have related projects.
4.Ability to build social-work networks: Open, functional social-work networks were established as the project progressed and ended.

For more information about my project, please refer to:

https://github.com/y0ungerH/application