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Shiqiao Zhou

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Permanent Address
Nankai Dist,
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Education

Australian National University Canberra, Australia
Master of Computing (Specialization: Machine Learning) July 2020 – Dec. 2022

- ***Overall GPA***: 6.69/7.00 (Equal to H1 level);

Nanjing University of Science and Technology Nanjing, China
Bachelor of Engineering in Mechanical Engineering Sept. 2015 - June 2019

- ***Overall GPA***: 3.38/4.00; ***Last two years GPA***: 3.60/4.00;
- First Prize University Scholarship for 2 times (Rank 1/268, Spring 2018 - Fall 2018);
- Third Prize University Scholarship for 3 times (Rank 25/268, Fall 2016 – Fall 2017);
- Excellent Graduate of Nanjing University of Science and Technology

Publication

- Shiqiao Zhou, Chen Yuan, Zhanpeng Meng, A Semi-Automatic Fruit Picker, Chinese Patent for Invention

Research Experiences

Comparing DL and BERT Methods on Commits' Frustration Detection July 2022 – Nov. 2022
Master Graduation Project

- Worked on 2.1M commits of software projects in three different programming languages (Java, Python, C) to detect expressions of frustration by different DL and BERT models
- Analyzed the insights in the results produced by these models and prepared for writing a paper for top conference

End-to-end Human-Object Interaction Network with Multi-modal Prior July 2022 – Nov. 2022

- Proposed a new one-stage HOI detector predicting HOI results by a multi-modal anchor with my teammates
- Implemented Verb Semantic Model to inject dataset-specific priors in word embedding and modified model encoder by using Grouping ViT inspired by top-conference papers

The 5th APAC HPC – AI competition June 2022 – Nov. 2022

- Modified Unet, Resnet, ViT and other DL models to improve the accuracy and efficiency of putative transcription factor binding sites --- a segmentation-like task
- Utilized multiple GPUs provided by the HPC to boost the model training process
- ***Honors***: Merit Prize

Design of trajectory optimization and control system for virtual photographic robot based on 6-DOF serial robot Dec. 2018 – June 2019
Undergraduate Graduation Project

- Solved Jacobian pseudo-inverse matrix of photographic robot and obtained the inverse kinematics numerical solution of the photographic robot by Newton iteration method
- Carried out a simulation of the shooting path of virtual photographic robot in MATLAB

- ***Honors***: Excellent graduation design in Nanjing University of Science and Technology

The Motion and Visual Control of the Mobile Robot Car July 2018 – Aug. 2018

Scientific Research Project of Chinese Academy of Sciences

- Created fully mathematical preparations for robotics, including position and posture representation, coordinates transformation, matrix rotation
- Conducted the trajectory planning based on the Cartesian space, and converted the continuous map signals into digital signals

Steerable Fruit Picking Device Sept. 2017 – May 2018

- Accomplished the overall mechanical structure design which consisted of operating unit, two telescopic rods, picking unit and collection & buffer unit
- Used Arduino Nano as main controller, designed the hardware circuit part and, wrote the control program
- ***Honors***: 1st award in Provincial Mechanical Innovational Design Competition, 1st award in College Mechanical Innovational Design Competition, 2nd award in College Innovation Cup

Teaching Experiences

Teaching Assistant of COMP4650 Document Analysis, ANU July 2022 – Dec. 2022

- Responsible for teaching 10 tutorials, marking two assignments and answering questions

Employment Experiences

AI Algorithm Intern, Pharmcube Ltd. Mar. 2022 – July 2022

- Built Rule-based and machine-learning models to do IR and NER tasks on clinical data
- Responsible for data pre-processing on large dirty clinical data

Software Development Intern, Bosch (China) Investment Ltd. Dec. 2020 – Jan. 2021

- Mainly responsible for debugging, testing and coding in Python script for project data
- Responsible for requirement management

Mechanical Engineering Intern, TRUMPF (China) Apr. 2020 – July 2020

- Designed factory equipment by SolidWorks and AutoCAD
- Studied CNC laser cutting machine production line

Mechanical Engineering Intern, Automotive Engineering Corporation July 2019 – Aug.2019

- Drawn 3D module of load lifting devices of Automobile assembly line by Inventor
- Analyzed the mechanical characteristics of devices by ANSYS

Other Information

Professional Skills: Python, Pytorch, Tensorflow, Java, MATLAB, AutoCAD, SolidWorks

Hobbies: Board Games, Singing, Reading

Language: TOEFL 91, GRE 321+3.0, CET-6 589