Yanwei Sun

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EDUCATION

Sept 2017 – Jun 2021， Industrial Engineering, School of Mechanical Engineering
Beijing Institute of Technology (BIT), China
Overall GPA: 3.89/4.0(Ranked first in my major) Second-year GPA: 96.3/100

HONORS/AWARDS

- 2019 Outstanding Students Pacesetter of Beijing Institute of Technology(Top 1%)
- 2019 National Scholarship(Top 1%)
- The First Grade Prize in 2019 Beijing Mathematical Modeling Competition(Top 1%)
- the Third Grade Prize in 2018 GlOBAL MANAGEMENT CHALLENGE(Top 5%)
- The First Grade Prize in 2019 Mechanical Design Competition,BIT(Top 1%)
- BIT Academic Excellence Scholarship(Top 5%), 2018, 2019

SPECIALIZED COURSE HIGHLIGHTS

- Mathematical Equations & Special Functions (100/100) , Advanced Calculus (99/100)
- Theoretical Mechanics (100/100), Mechanics of Materials(100/100)
- Operational Research(99/100)
- Electronic Technology (98/100) Applied Statistics (97/100)

RESEARCH EXPERIENCE

Transfer Learning: a Riemannian geometry framework for SPD Matrix Learning Nov 2019-present
Individual Research, Advisor: Prof. Boyu Wang, Western University,Canada

- Aim to optimize the Riemannian geometry framework for SPD matrix learning by introducing the transfer learning
- Plan to test the accuracy in image classification and motor imagery classification
- Writing the paper now.

Networks: A Set of Measures of Football Teamwork based on Betweenness Centrality and Clustering Coefficient Dec 2019-Present
Individual Research, Advisor: Prof. Jia Hao, Beijing Institute of Technology

- In order to quantify the performance of each player in football team, we build an complicated network and extract important information based on betweenness centrality
- We test our model based on the MCM 2020 Problem D data, which shows our result is satisfying
- We nearly finish the paper due to 20 Feb.

Multi-functional companion mechanical dog (for the elderly) Jun 2019 – Present
Individual Research, Advisor: Prof. Qingsheng Luo, Beijing Institute of Technology

- Aim to develop a product that can alleviate the loneliness of the elderly

- This mechanical dog has the function of reminding the elderly to take medicine, making simple conversations and massaging, etc.
- Applying for the patent now

Emotion Recognition based on EEG Jun 2019 – Aug 2019

Individual Research, Advisor: Prof. Jia Hao, Beijing Institute of Technology

- Aim to develop an online brain-computer interface that analyzes emotions in real time
- Collected data using emotiv epoc+
- Analyzed data with machine learning using python
- Successfully judged two different emotions: positive or negative emotion

Design of digital spelling system based on EEG ssvep Jun 2019 – Aug 2019

Public elective course, Advisor: Prof. Yanfei Lin, Beijing Institute of Technology

- Programming the stimulus paradigm through matlab software programming.
- The extracted EEG signals were subjected to typical correlation analysis (CCA) calculation through matlab software programming.
- Through the matlab software programming, a real-time feedback system is programmed, and the identified signals are fed back to the subject in real time through the system.

LANGUAGE PROFICIENCY

Chinese Mandarin: Native

English: TOEFL 81

SKILLS& OTHERS

Teaching: I am/will be a **teaching assistant** for Haosen Chen's Mechanics of Materials class, BIT from Feb,2020 --- Jun,2020

Computer Skills: C (Course-study); Python (Self-learnt); Matlab(Self-learnt); Tensorflow(Self-learnt)

Intern: I've done a short internship to The Hong Kong University of Science and Technology in July,2019

Academic Plan: I will apply for PhD directly after my bachelor degree and want to be a professor at university. My dream is to understand the essence of intelligence(not limited to human) and consciousness.