SHAOZHE HAO

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EDUCATION

Huazhong University of Science and Technology *Sep. 2017 - Now*
Bachelor of Engineering Average Grade: **92.8**
School of Atificial Intelligence and Automation Rank: **2/152**

RESEARCH INTEREST

What attracts me is the application of machine learning in biological identification, especially EEG signals, and I am also interested in computer vision and image processing, which I major in.

PROJECTS

Innovation Research Project *Mar. 2019 - Now*

- This project entitled "EEG-based user authentication and identification methods" is expected to establish a user authentication and identification method based on electroencephalogram (EEG) data. In this project, We need to gradually enhance the accuracy to get closer to actual scenario application for biological identification.
- I am supposed to achieve signal acquisition, preprocessing, feature extraction, neural network algorithm implementation and accuracy rate analysis. I have applied low pass filter and common spatial pattern to extract frequency domain features of raw EEG signals and then used KNN and CNN algorithm to classify different trials into specific subjects. The accuracy is nearly **98%** when the training set and the test set are from the same sessions, or rather the same time span, while it still needs to be improved when the training set and the test are from different sessions.

Deloitte Digital Innovation Camp *Aug. 2019*

- In this business match, our team developed an analysis system to portrait e-commerce company profiles. Based on the algorithm via Matlab, our system can rate a company from 5 aspects: freight, popularity, price, diversity, and overall score. According to the results, we can end up with a score figure for each company to serve as the obtained profile.
- I took charge of the part of algorithm for rating. I respectively designed the different algorithm for each aspect after processing the raw data of 6 e-commerce companies from Internet. After calculating all the features, the eventual outcome of our system will be polygon scoring figures of different companies.

C Language Curriculum Design *Sep. 2018 - Nov. 2018*

- I completed a project named "information inquiry system for 2018 World Cup" with my teammate, which was developed by C Language on Borland C++. We achieved lots of functions: to register and login, information searching for teams, players and games, news reports and video playing on the user side; and user administrating, information revising and news uploading on the administrator side.
- I designed an efficient and economic algorithm for the page jump logic due to the limited memory of Borland C++. Besides, I achieved the function on my own to register and login, to play videos, to add a favorite team or player for a specific user and to rank the players and teams based on their previous data.

HONORS & AWARDS

- **National Scholarship** *Oct. 2018*
- **Special A of Huazhong University of Science and Technology** *Oct. 2018*
- **School Merit Student** *Oct. 2018*
- **Scholarship for Academic Performance** *Apr. 2018*

CERTIFICATES

- TOEFL **104**
- MCM/ICM S award
- Computer rank examination - level 3 \level 2
- Coursera: machine learning \python data structures

EXTRA-CURRICULAR

Oxford Summer School *Aug. 2018*

I participated in the Oriel College of Oxford University Summer Exchange Program. I took two courses of Artificial Intelligence and Numerical Analysis at Oxford University, and finally passed the exams to obtain credits. I have gained academic knowledge and English communication skills, met many excellent students from all over the world.

Sri Lanka International Volunteer *Jul. 2018*

I Spent the summer vacation time participating in Sri Lankan international volunteer. I taught English and mathematics at local schools there, and contributed to the basic education there. It was a good opportunity for me to have learned about local culture and customs, experienced this unique country and improved my intercultural communicative competence.

SKILLS

Languages	C/C++, Python, Matlab
Tools	MS Office, Latex, Photoshop