

YINGHAO CAI

Southeast University, Nanjing, China
+8615727105325 yinghao@seu.edu.cn

EDUCATION

Sept. 2020 –
Jun. 2024

School of Artificial Intelligence, Southeast University

Nanjing, China

Major: Artificial Intelligence

- GPA:3.88/4; Average Score: 90.3/100; Rank: 3/94

EXPERIENCE

In Progress

Identification of Influential Group in Attributed Graph through Explaining Graph Neural Network

Nanjing, China

Leader

- Analyzed the given problem and designed the research plan to find solutions by modeling the problem as a combinatorial optimization problem

- Adopted the reinforcement learning algorithms and started Python and C++ hybrid programming as expected

2022 – 2023

Sparse and Low-Rank High-Order Tensor Regression via Parallel Proximal Method

Nanjing, China

Member

- The research paper proposed an efficient algorithm to solve the problem of high-dimensional low-rank tensor regression

- Tested the performance of this algorithm in video classification processing with the UCF101 Dataset and assisted in the refining of the research and the paper

Mar. 2023 –
Jun. 2023

Knowledge Engineering Practice: Diabetic Knowledge Map Construction and Prescription Prediction

Nanjing, China

Leader

- Made the project plan according to team discussions and the strengths of team members and designed the process of knowledge map construction

- Read a large number of related papers and figured out an algorithm to deal with the thousands of pieces of data on diabetes cases

- Helped the team and other members with data processing tasks such as named entity recognition

Mar. 2023 –
Jun. 2023

An Extended Study of Knowledge Neurons: Knowledge Neurons in Multilingual Pretrained Language Models

Nanjing, China

Leader

- Proved the universality of a framework for extracting knowledge neurons presented in the paper *Knowledge Neurons in Pretrained Transformers* and wrote a study report on it

- Designed and conducted experiments independently with multilingual BERT and other multilingual data sets on different language models

- Got familiar with the design and operation of a whole research project and academic paper writing

Sep. 2022 –
Dec. 2022

Video Caption Challenge Project

Nanjing, China

Leader

- Extracted the audio and video feature vectors from the given videos with FFmpeg and other models and then used S2Vmodel to generate the tags and form the video caption

- Deepened my understanding of the practical application of deep learning technology and strengthened my skills in using learned knowledge to solve real problems

Mar. 2022 –
Jun. 2022

Image Segmentation of ARDS Patients' Lung Lesion Area

Nanjing, China

Member

- Adopted F3Net in our design and tested and improved the model through ablation study to realize improving the accuracy of image segmentation of lesion region

- Explored the application of image processing in the medical field

Jul. 2022 –
Aug. 2022

Tutor Recommendation System Development

Nanjing, China

Leader

- Built a website to realize the function of recommending graduation design tutors to undergraduate students, including collecting tutors' information with a web crawler, building the back-end database, designing the front-end interface and search recommendation algorithm, as well as connecting the front and back ends

- Enriched my knowledge of web building and design; self-learned different frameworks like HTML, CSS, JavaScript, and Vue

2021 – 2022

Superpixel Segmentation Task based on Deep Clustering

Nanjing, China

Leader

- Adopted and compared two methods (DEC and SENet) to realize the superpixel segmentation; did a lot of research and improvements and presented a report
- Learned from scratch how to design a study project, and how to adjust the research method in time and give clear and logical reports

AWARDS

2020 – 2021

China National Scholarship, National Scholarship Review Committee

2020 – 2021

Merit Student, Southeast University

2021 – 2022

Excellence in Social Practice Award, Southeast University

PERSONAL

Language Skills: English: Advanced

Software Skills: Python, C++, Matlab; Linux; CSS, HTML, Javascript; Protégé, Neo4j