

Peng(Richard) Xia

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EDUCATION

Soochow University

Suzhou, China

Bachelor of Science in Computer Science and Engineering

Sept. 2019 - Expected Jun. 2023

- **GPA:** 3.7/4.0 **Average Score:** 88.13/100
- **Coursework:** Deep learning, Neural Network, Machine Learning, Computer Vision, Algorithms
- **Advisors:** Prof. Min Zhang, Dr. Juntao Li, Dr. Junhui Li

National University of Singapore

Singapore

The University Alliance of the Silk Road (UASR) Summer Courses

Jun. 2022 - Jul. 2022

- **Grade:** 90%
- **Coursework:** Drug discovery for Ocular Angiogenic Diseases, Animal Models of CardioVascular Disease
- **Advisors:** Dr. Xiaomeng Wang, Dr. Jiong-Wei Wang

RESEARCH EXPERIENCE

Chinese Grammatical Error Correction | *Natural Language Processing*

Dec. 2021 – Apr. 2022

- Obtained training sets of large scale and fine grit by data augmentation
- Compressed a Seq2Seq model and improved its robustness by knowledge distillation
- Submitted a preprint to arXiv 2208.00351. [arXiv] [Code]

Neural Chat Translation | *Natural Language Processing*

Sept. 2021 – Feb. 2022

- Trained on WMT20 and fine-tuned on chat translation corpus (BConTrasT and BMELD).
- Modeled the properties, such as role preference, dialogue coherence, and translation consistency

Lane Detection and Vehicle Departure Warning System | *Computer Vision*

Oct. 2021 – Sept. 2021

- Used the cascaded convolutional neural network to detect lane lines
- Designed a warning module for the system in case the car deviates from the lane

Fatigue Driven Detection Based on Huawei Atlas 200 DK | *Computer Vision*

Sept. 2021 – Dec. 2021

- Used multi-task cascaded convolutional network for face detection and feature point location
- Used convolutional neural network to detect the state of the eyes and mouth from ROI images

COMPETITION ACHIEVEMENTS

Shanghai-HK Interdisciplinary Shared Tasks "Trigger Identification"

Apr. 2022 - Jun. 2022

1st place(phase 1) & 3rd place(phase 2)

Hong Kong & Shanghai, China

- Used the BigBird model for the message representation and mean pooling
- Added extra linear layers and used R-Drop which is a simple and efficient regularization technique

The 3rd Huawei DIGIX AI Algorithm Contest

Aug. 2021 - Sept. 2021

Second Prize

Nanjing, China

- Designed an article quality discrimination algorithm to predict and discriminate the categories of articles
- Based on BERT model and PU Learning.

Computer Design Contest

Jan. 2021 – Mar. 2021

Winning Prize

Zhenjiang, China

- Used BERT model to encode vehicle track data to predict lane trajectory
- Designed and displayed the effect of the web page, using HTML, CSS, JavaScript

Mathematical Contest In Modeling

Feb. 2021

Honorable Mention

Bedford, USA

- Established models to explore the effects of fungi's various characteristics, environments and diversity
- Used algorithms to fit and process data about fungi; analyzed the relevant variables and came to a conclusion

WORK EXPERIENCE

Airdoc Technology Inc

Jul. 2022 – Present

Algorithm Intern

Shanghai, China

- Trained multi-modal models for detecting for several diseases by fundus images and clinical data
- Collaborated with colleagues or doctors to write related patents and papers

China Construction Bank

Jul. 2021 – Aug. 2021

Intern

Yancheng, China

- Participated in lobby service, customer marketing, product promotion, merchant development
- Participated in the summer rural practice program

PATENTS

Article quality discrimination software based on multi-model transfer pre-training

Feb. 2022

NLP Research Centre, Soochow University

Suzhou, China

- Junhui Li, **Peng Xia**, Kaide Zeng, et al.
- CN Software Copyright. 2022SR0228307.

Lane detection system based on cascaded convolutional neural network.

Feb. 2022

NLP Research Centre, Soochow University

Suzhou, China

- Junhui Li, **Peng Xia**, Kaide Zeng.
- CN Software Copyright. 2022SR0248890.

VOLUNTEER AND CAMPUS EXPERIENCE

Science and Technology Association, Soochow University

Oct. 2020 – Jul. 2021

Vice President

Suzhou, China

- Organized several large-scale activities, such as English drama competition for freshmen
- During my tenure, the organization won the award of excellent branch association of the university

Youth League Committee, Soochow University

Sept. 2020 – Oct. 2020

Volunteer for the 120th anniversary of Soochow University

Suzhou, China

- Prepared supplies for the school's anniversary event
- Received guests; took event reports

SKILLS

Languages&Tools: Python, JavaScript, Java, HTML, CSS, SQL, LaTeX, Git

DL&ML Frameworks: PyTorch, TensorFlow, Keras

English Level: CET-6(539), IELTS(6)