

Shaobo Wang

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EDUCATION

Harbin Institute of Technology(Wei Hai)

Sep 2018 - Jun 2020

Sophomore Software Engineering School of Computer Science

- GPA: 3.9 / 4.0 (No.1/236 in School of Computer Science)
- Relevant Coursework: Problem-Oriented Programming(99), C++(97), C(97), Calculus(98), Probability Theory(96), Linear Algebra(95), Discrete Mathematics(94), Data Structure(93), Principles of Computer Organization(90)
- Further Knowledge: Machine Learning, Deep Learning, Computer Vision(denoising and vision-and-language)

HONORS & AWARDS

- Outstanding Student Leader of Harbin Institute of Technology *April 2020*
- Outstanding Student Member of Harbin Institute of Technology *April 2019*
- National Mathematical Competition of College Students, 2nd prize *Dec 2019*
- National English Competition of University Students, 3rd Prize *Nov 2018*
- ACM Competition of Weihai, 3rd Prize *Dec 2018*
- CTF Competition of Campus, 2nd Prize *Jan 2020*
- Principal Cup of Innovative Competition, 1st Prize *Dec 2019*
- National Scholarship *Oct 2019*

RESEARCH EXPERIENCE

Dengue Incidence Prediction in Brazil

Mar 2020 - Present

Tsinghua University , Department of Earth Science

Instructed by Professor Zhichao Li

- Utilize remote sensing satellite images to extract semantic segmentation and spatial information and combine with regional meteorological information processing in Brasilia
- Apply fast.ai + pytorch in building LSTM neural network for time-series modeling and compare the result with traditional vector incidence model
- Modify the model with more spatial-related information and use spatiotemporal method convLSTM to enhance the ability of the time-series model

Computer Vision Research

Dec 2019 - Present

Harbin Institute of Technology , Intelligent Vision Lab

Instructed by Professor Shengping Zhang and Yuankai Qi

- Research primarily on image denoising methods in different areas, including spatial methods, wavelet methods, hybrid noise and deep learning(CNN-based) methods
- Currently work on the field of vision-and-language and visual tracking methods

PROJECT

Document Scanner

Jan 2020 - Present

Team Leader, instructed by Prof. Shengping Zhang

- Implement DnCNN model to denoise the image/document
- Modify the model with U-net architecture and residual blocks and replace the loss function with generative model loss
- Utilize Super-Resolution techniques to enhance the quality images and documents
- Introduce OCR method for document recognition and related work

Face Recognition Software

Feb 2020 - Present

- Implement FaceNet model on campus face recognition and transfer it into Android devices

Bank Credit model based on Decision Tree

Nov 2019 - Nov 2019

- Utilize machine learning algorithms, especially CART in the model with pruning techniques and compare it with random forest-like methods
- Design concise UI with python and get the top 3 Grade in the Course Project Design

Digits Recognition based on CNN

Jan 2019 - Feb 2019

- Implement Convolutional Neural Network with C++ and OpenCV
- Self-build network step by step, including basic matrix operation and all the details in CNN

Communication Software

Jan 2019 - Jan 2019

- Accomplished a communication software based on Java Socket and fundamental knowledge of TCP and UDP protocol

OTHER EXPERIENCE

HITwh Online Course for Students

Nov 2019 - Present

Founder, Organizer, and Instructor

- Record high quality courses with own experience and cognition on specific fields in Software Engineering and Computer Science and publish them on our websites and have more than 64,000 people watched our courses

Academic Assist Center of Department

Sep 2019 - Present

academic counselor of freshmen

- Serve all the students in the department as an assistant and apply data analysis in scoring, searching, sorting and lots of work of department

SKILLS, CERTIFICATIONS & OTHERS

- **Skills:** Python Data Analysis, Machine Learning, Deep Learning, Computer Vision, Pytorch
- **Certifications:** Machine Learning Foundations(Coursera Certificate)
- **Languages:** English (TOEFL 86,CET-6), Spanish (a bit)
- **Interests:** Chess(the champion in Anhui Province for years), Basketball, Music (Piano, Singing), Magic Cube, Reading, Movies, History