

# Shun Zhang

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## EDUCATION

**School of Mathematical Sciences, Fudan University**

*B.S. in Applied Mathematics GPA: 3.46/4.0*

**Shanghai, China**

*Sept 2015 - June 2017*

**School of Data Science, Fudan University**

*B.S. in Applied Mathematics (DS Oriented) GPA: 3.63/4.0*

**Shanghai, China**

*Sept 2017 - June 2019(expected)*

## PROJECTS

**Painting Authentication and Style Transfer of Raphael**

*Jan 2018 - Feb 2018*

- Extracted features by a tight frame, select features through a forward algorithm and then conducted classification using an out-lier detection algorithm
- Applied different image pretreatments and do style transfer mainly based on A Neural Algorithm of Artistic Style proposed by Gatys et. al.

**A Gomoku AI built in Python**

*Mar 2018 - June 2018*

- Built a competitive Gomoku AI based on Minimax Search, along with the VCT/VCF module, fast-evaluation module, Zobrist module and other tricks
- Also, MCTS alg. and Threat Space Search alg. are explored at the moment

**Analysis of Social Information (5m records) with PySpark**

*Apr 2018 - June 2018*

- Applied statistical analysis using RDD-based APIs
- Applied NaiveBayes model using Dataframe-based APIs and MLlib

**Parsimonious Learning of Deep Convolutional Neural Networks**

*Mar 2018 - now*

- Utilize Split-LBI regularization in Deep Convolutional Neural Networks
- Based on Split-LBI(or LASSO), we can prune a DCNN according to the weights'(or filters') ranking, which gives positive outcomes on both LeNet-5 and ResNet-18.

## EXPERIENCES

**SK SUNNY Program (Life-Style Group), Volunteer**

*Sept 2016 - Jan 2017*

- Organized weekly science courses on the topic of *Genetics* for 22 students in Shui Fung Road Primary School
- Awarded Outstanding Volunteer and National Top 5 Educational Documentary Award

**Student Union of SMS, Vice Minister of Arts and literature**

*Sept 2016 - June 2017*

- In charge of planning and execution of activities including *The Voice of SMS*, *Boy's Day* and *Girl's Day*

**Yunnan Dali Innovative Development Planning Competition, Member of Committee**

*July 2017*

- Led a 14-day competition in cooperation with Dali government involving 40 college students from Shanghai and Hongkong

**Gapper Environmental Protection Program, Volunteer**

*July 2017 - Aug 2017*

- Participated in environmental protection programs and culture exchange events in Galle, Sri Lanka

**Shangjin Investment Company, Intern**

*Mar 2018 - June 2018*

- Explored possible Reinforcement Learning based models for auto-investment system
- Built an auxiliary Tree-regularization module to help train and visualize a classification network

**Rutgers CBIM Lab, Summer Research Intern**

*July 2018 - Aug 2018*

- Build a GAN-based data augmentation framework for 2D MRI slices, which generates images from noise and super-resolved to 256x256
- Explore GAN-based data augmentation model for '3D' medical data, a sequence of MRI slices

## ADDITIONAL

- Solid foundation of Math: Mathematical analysis (3.7/4.0), Advanced Algebra (3.7/4.0), Geometry (4.0/4.0), Basic Statistics (4.0/4.0), Statistic Computing (4.0/4.0), Time Series Analysis (3.7/4.0)
- Relevant Coursework: Data Structures, Machine Learning, Abstract Algebra
- Programming Languages: Python, Matlab, R, Latex
- English Status: CET-4(632), CET-6(563), TOEFL(106), GRE(152+169)