TONG ZHAO

Website: tong-zhao.github.io

Age : 25 years old

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Educations

École Normale Supérieure Paris-Saclay *2018.09 – Present*

Mathematics, Vision, Learning (MVA) Master 2 student

École des Ponts ParisTech *2016.09 – Present*

Applied Mathematics and Computer Science 3rd year graduate engineering student

Shanghai Jiao Tong University *2012.09 – 2016.07*

Information Security Bachelor

Professions

Télécom ParisTech **CG Group** *2019.04 – Present*

- Research topic : surface reconstruction with shape priors

California Institute of Technology **Applied Geometry Lab** *2018.05 – 2018.09*

- Worked on spectral surface reconstruction and implemented a novel CGAL component
  - Studied differential exterior calculus formulas
  - Implemented the whole algorithm pipeline (Cpp + Eigen + Spectra)
  - Implemented visualization tool (Marching Tetrahedron, Slice Plots)

INRIA Sophia Antipolis Méditerranée **Titane Team** *2018.01 – 2018.05*

- Studied sophisticated geometric features for the classification of big point cloud data

BNP Paribas Asset Management **Finance Engineering** *2017.07 – 2017.12*

- Built a market timing model for US stocks using factor analysis and machine learning theories
- Wrote a python library for data preprocessing and modeling

Intel Asia-Pacific R&D (SH) Ltd. **Software and Service Group** *2015.07 – 2016.06*

- Studied the theory of deep learning and applied the algorithm on our product of intelligent billboards
  - Face detection (Haar / LBP + Adaboost)
  - Face attribution (age, gender and race) recognition (Caffe, Multi-scale CNN, Multi-task CNN)
- Tested our softwares and worked on data mining (Python)

Cryptography and Information Security Lab **Member** *2013.07 – 2016.06*

- Participated in the product development team of "Intelligent Video Surveillance System"
  - Be in charge of the database (Python + Django + Postgre SQL)
  - Implemented the detection of abandoned objects algorithm (OpenCV + Python, GMM + SVM)

Projects

PM10 Prediction Challenge — **Member** — *2019.02 – 2019.04*

- Participated in the data challenge on ENS platform, ranked 1st both on academic and public board until the end of the course. (LightGBM, neural network)

From Pixel to Mesh — **Member** — *2018.11 – 2019.01*

- Re-implemented and improved Pixel2Mesh on PyTorch (Graph neural netowrk)

AlphaDraughts Zero — **Member** — *2018.11 – 2019.01*

- Applied AlphaGo Zero algorithm on English Draughts and implemented a GUI for the boardgame. (PyTorch + PyGame)

Project of IMI (Project of department) — **Member** — *2017.01 – 2017.05*

- Worked on the project "Prediction of the number of bankruptcies for every month" (Tf-idf + Time series model + Lasso)

Project of "Modeling, Probability and Simulation" — **Individual** — *2016.10 – 2017.02*

- Worked on the project "Quick search in large databases of images with neural network descriptors" (Locality sensitive hashing)

Outstanding Graduation Project (A+) (Rank : 1 / 83) — **Individual** — *2015.12 – 2016.06*

- Completed the project "Research on Face Recognition Algorithms" (Eigen Face + SVM, VGG, neural network descriptors + classifier)

2015 Mathematical Contest In Modeling — **Leader** — *2015.02*

- Led the team to complete the establishment and analysis of "Ebola epidemic" model (SEIR + PDE)

Jiao Tong University 25th Participation in Research Program — **Individual** — *2013.10 – 2014.04*

- Finished the Research Program "Research on Moving Target Trajectory in Video Surveillance" (Camshift)

Competences

Language

Chinese : C2 (native speaker)

English : C1

French : C1

Profession

Programmation : C, C++, Python, Matlab

Library : Caffe, Pytorch, Tensorflow, OpenCV, CGAL

System : MacOS, Linux, Windows

Honors

China Scholarship (From Ministry of Education of China) *2016 & 2017*

Shanghai Outstanding Graduate (From Shanghai Education Bureau) *2016*

National Encouragement scholarship (From Ministry of Education of China) *2014 & 2015*

Honorable Mention in 2015 Mathematical Contest In Modeling (From COMAP) *2015*

Hobbies

Music : Piano, Music theory

Sport : Table tennis, Swimming, Traveling