

Chengyuan Deng

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EDUCATION

Rutgers University, New Jersey, U.S.A | **Major GPA: 3.67**

Master of Science in computer science

Sept 2018

Tongji University, Shanghai, CHINA

Major: Bachelor of Engineering in Electrical Engineering | **Major GPA: 3.62**

Minor: Bachelor of Science in Applied Mathematics

Sept 2014-Jun 2018

HK Polytechnic University, Exchange student, Hong Kong

Jan 2017- May 2017

PUBLICATIONS

C. Wang, C. Deng, S. Wang, "Imbalance-XGBoost: Leveraging Weighted and Focal Losses for Imbalanced Binary Classification with XGBoost", *IEEE Transactions on Emerging Topics in Computational Intelligence*, 2019. ([Arxiv Preprint](#))

TECHNICAL SKILLS

Full-stack development: React/Vue.js+Node.js+Firebase/MongoDB

Machin Learning: Deep learning with Tensorflow, Fastai

Programming languages: C++, C#, Java, Python, Javascript, MATLAB, R

Data mining, database, data visualization, AWS

EXPERIENCE

Machine learning intern, Recurrent.ai

August 2019 - now

Software engineering intern, Tongji Fintech and Big Data Research Institute

Jun 2017- Sept 2017

Data science intern, Haitong Securities Co., Ltd

Jul 2016- Sept 2016

PROJECTS

Research & Course:

Adaptive Spiking Neural Network Controlled Robot Arm Movement, Neuromorphic computing Research Feb 2019-now

- Develop an algorithm to transfer Spike Neural Networks generated by Loihi to guide the robot moving its arm.

Hybrid Neural Network Based Recommendation System

March 2019-May 2019

- Propose and implement a hybrid neural network model integrating user history data with tensorflow

Diverse Animal Recognition at Wild Watch Kenya, Computer vision Research

Feb 2019- May 2019

- Recognize animals in images from *Serengeti Nation Park* with CNN, implement spatial-temporal analysis
- The long-term goal is to speculate their activities related with the *Great Migration* and if they are endangered.

C# Based Development of Temporary Speed Restriction Server Simulation System

Mar 2018- Jun 2018

- Developed a integrated server system for centralized traffic control, radio block center, train communication control and adjacent TSRS, distributed on the train dispatching control simulation system in the lab of Tongji University

Towards Tunable Consensus Clustering for Functional Brain Connectivity on Music FMRI Analysis, Research 2018

- Optimized the algorithm "Bi-CoPAM" which synthesized three representative clustering algorithms into consensus partition matrices to find the best clustering result, which responds to certain brain zones. Obtained better recognition.

Music Score and Sheet Library Community Development, Full-stack development

May 2017-Aug 2017

OpenGL Based Shadow Filling Algorithms of Closed Polygon, Computer graphics

Nov 2016

Awards:

Yamaha Asian Music Scholarship of Honorable Mention

ACM Programming Contest, Shanghai Regional

Mar 2018

- Two students formed a team and did online programming, finally came to the 4th place and won the **first** prize

Mathematical Modeling Invitation of U.S.A

Feb 2018

- Developed models for Multi-hop HF Radio propagation, simulated and analyzed numerically; Won the second prize

National Undergraduate Contest in Mathematical Modeling

Sept 2017

- Realized parameter calibration and imaging of CT system, evaluated and optimized the system; Won the **first** prize

National Undergraduate Contest in Electrical Design

July 2017

- Did circuit design and realization of adaptive filter with FPGA in a group of three, won the third prize

LEADERSHIP EXPERIENCE

President, Piano Club of Tongji University

Sept 2017-Jun 2018

Program manager, Junior Achievements

Mar 2016- Jan 2017