Frederick (Xinliang) Zhang

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Research Interests

Natural Language Processing (Question Answering & Generation, Machine Translation, Information Retrieval), Deep Learning, Mixed Integer Linear Programming, Machine Learning, Data Mining, (Statistical) Linguistics

Education Background:

The Ohio State University, Columbus, U.S.A **Aug. 2018--present**

Major in Computer Science and Engineering **B. S.**

Major in Industrial and Systems Engineering **B. S.**

Minor in Math

Academic Performance: GPA: 3.995 Dean's Lists (Every semester)

Sichuan University, Chengdu, P.R.China **Sept. 2016--present**

Major in Industrial Engineering (Transfer) **B. Eng.**

Academic Performance: GPA: 3.98 Weighted Average: 96.15

Academic Performance and Comprehensive Performance both rank 1st (1/159)

Excellent performance on STEM courses. Weighted average of core STEM courses is 98.31

Hangzhou Xuejun High School, Hangzhou, P.R.China **Sept. 2013-June 2016**

Natural Science **High school degree**

Won 2nd Provincial Prize in China Mathematics Olympiad; Excellent Student Award; Served as Class Leader

Professional Experience:

Research (Undergraduate Research Assistant)

Question Generation in Clinical Field & Create massive Emr-QA dataset June 2019—present

Supervised by Dr. Huan Sun

Training Neural Network with Integer Programing May 2019—Aug. 2019

Supervised by Dr. Chen Chen

The essence is to leverage Mixed-Integer-Linear-Programming (MILP) to train Feed-forward Neural Network. Explore the feasibility (accuracy-efficiency tradeoff) of MILP training approach. The empirical results show MILP performs better than BP-approach on non-large dataset/network.

Research Training in Financial Futures & Quantitative Investment Sept. 2017—June 2018

This research training mainly focuses on the field of quantitative investment on futures.

I am responsible for developing strategies for quant, backtesting critical futures indicators by using existing historical data, and implementing and optimizing strategies through MATLAB.

Teaching (Undergraduate Teaching Assistant)

UTA/Lab Assistant in CSE 2231 (Software II: Software Development & Design) 2019 Autumn

UTA/Lab Assistant in CSE 2221 (Software I: Software Components) 2019 Spring

UTA/Lab Assist. in CSE 2112 (Modeling and Problem Solving w/ Spreadsheet & Database) 2019 Spring

Guest Lecturer in IE 1085 (Departmental Seminar: a 45-min seminar on *Intro to MCM*) 2018 Spring

Awards & Honors:

Research Award

Lumley Engineering Fund Scholarship (Undergraduate research award)	Nov. 2019
Candidate in Graduation with Honors Undergraduate Research Distinction	Starting Sept. 2019

Academic Award & Scholarship

"Tomorrow Advancing Life" Merit Scholarship (Top 0.1% at SCU)	May 2019
National Scholarship (Highest Undergraduate Honor in China; 2017-18)	Sept. 2018
SCUPI Best Academic Achiever Award (Academically Top 1; 2017-18)	July 2018
National Scholarship (Highest Undergraduate Honor in China; 2016-17)	Sept. 2017
SCUPI Best Academic Achiever Award (Academically Top 1; 2016-17)	Sept. 2017

Academic Competition Award

Distinguished Performance in Mathematical Modeling Contest	Dec. 2018
Honorable Mention in Mathematical Contest in Modeling	Apr. 2018
The Provincial 2nd Prize in Contemporary Undergraduate Mathematical Contest in Modeling	Sept. 2017
The 3rd Prize in Sichuan University Mathematical Contest	June 2017
The 2nd Prize in Sichuan University Mathematical Contest in Modeling	May 2017

Honor & Glory

The Excellent Departmental Leader of Student Council at Sichuan University	June 2018
The "Best One hundred" Top 10 Class Leader at Sichuan University (Highest Honor at SCU)	May 2018
The Excellent Student at Sichuan University (2017-18)	Sept. 2018
The Excellent Class Leader at Sichuan University	Sept. 2017
The Excellent Student at Sichuan University (2016-17)	Sept. 2017
The Certified Volunteer in IET English Speech Contest (2017, 2018)	June 2017, June 2018
The Winner of SCUPI Community Contribution Award	May 2017
The 2nd Prize in Sichuan University Video Competition of 120th Anniversary	Dec. 2016

Skills & Languages:

Technical Skill

Programming: MATLAB (10k lines+), Java (8k+), Python (4k+), C (3k+), Ruby (2k+), JavaScript, SQL
Engineering software: Lingo, SPSS, CATIA, Excel, Access, VBA, GAMS, Minitab, Gurobi, Tableau, Arena
Tools: Git, Linux, LaTeX, PyTorch (Machine learning package)

Language Proficiency

Chinese (Native), English (Working proficiency), Japanese (Elementary proficiency)

Selected Non-Academic Experience:

Working Experience:

Finance Intern @SPD Bank (Hangzhou Branch), Hangzhou, P.R.China	July. 2018-Aug. 2018
Librarian @Sichuan University, Chengdu, P.R.China	Oct. 2017-July 2018

Student Organization Experience (@SCU):

Peer Advisor	Sept. 2017-July 2018
Vice President of Finance in SCUPI Student Council	June 2017-June 2018
Class Leader	Sept. 2016-Jan. 2018
Member of Editing Department in Science and Technology Association	Sept. 2016-June 2017

References:

Huan Sun, Ph.D.
Assistant Professor
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Minking K. Chyu, Ph.D.
Distinguished Service Professor
Leighton and Mary Orr Chair Professor of Mechanical Engineering
Associate Dean for International Initiatives
Swanson School of Engineering, University of Pittsburgh
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