

CHANG FENG

+1(434) 294-5516 ♦ cf489@cornell.edu ♦ 15 Fairview Sq., Ithaca, NY

EDUCATION

Cornell University

Sept 2021- Dec 2022

M.Eng. Operations Research and Information Engineering (GPA: 4.06)

University of Virginia

Aug 2019 - May 2020

M.S. Commerce (Finance track)

University of Virginia

Sept 2015 - May 2019

B.A. Economics & Computer Science

RESEARCH EXPERIENCES

Simulation of Special Functions

Present

- Developed a simulation approach to approximate special functions using the stochastic representation for the class of entire functions.
- Implemented the algorithm for Monte-Carlo Simulations and tabulated experiment results. Showed that the algorithm produce exact approximations in the sense that errors are within bounds of the Monte-Carlo errors.
- The paper comes from an independent research project with Prof. Pierre Patie at Cornell University.

Efficient Dynamic Pruning of DNNs with Adam Signal-to-Noise Ratio

Fall 2021

- Developed the usage of Signal-to-Noise ratio in the Adam optimizer to generate masks for dynamic neural network pruning.
- Implemented dynamic pruning of ResNet-56 and performed inference on CIFAR-10 dataset to conduct experiments on our new algorithm. Attained benchmark performance.
- Reported the findings as part of the final project of a PhD-level research seminar course in Machine Learning at Cornell.
- *Selected References:*
 - Lin, T., Stich, S. U., Barba, L., Dmitriev, D., and Jaggi, M. *Dynamic model pruning with feedback*. International Conference on Learning Representations, 2020.
 - Kingma, D. P. and Ba, J. *Adam: A method for stochastic optimization*, 2014. arxiv:1412.6980.

Approximate Cross Validation for Structured Models

Fall 2021

- Developed an algorithm for performing approximate cross validation for time series, by combining the infinitesimal jackknife algorithm with Bayesian search. The algorithm produced very accurate approximations to the validation loss in the context of Leave-Future-Out-Cross-Validation(LFOCV) scheme.
- Reported the findings as part of the algorithm development project of a Master-level Machine Learning class at Cornell.
- *Selected References:*
 - Giordano, Ryan, Michael I. Jordan, and Tamara Broderick. *A higher-order swiss army infinitesimal jackknife*. arXiv:1907.12116 (2019)

PROFESSIONAL EXPERIENCES

Pharmaceutical Network Supply Chain Resiliency

Spring 2022

Master of Engineering Project

Ithaca, NY

- Developed the usage of the spectral clustering algorithm to identify nodes with high level of interdependence in a supply chain. Showed this approach obtains stable and meaningful results in the case of pharmaceutical supply networks in the U.S.
- Developed the inter-state dependency score and cross-entropy Score as resiliency measures for nodes in supply chain networks.
- Completed this project as part of the Engineering Design Project at Cornell, sponsored by the Mitre Corporation.

Virtual Force

Dec 2020 - April 2021

Analyst Intern

Remote

- Conducted exploratory research and rapid-prototyped a platform solution (Warp Relief) for renters to apply for the Covid-19 Emergency Rental Assistance Program.

Alpha Capital, Inc

Jun 2020 - Oct 2020

Investment Banking Analyst Intern

Remote

- Provided support for Managing Director regarding the firm's active M&A and LBO deals including industry analysis, business profile, strategic options, valuation, presentations, deal and structure.
- Participated in company-training program including valuation, M&A, LBOs, presentations and soft skills

Shanghai Baopu Investment Co.

Dec 2019 - Jan 2020

Analyst Intern

Shanghai, China

- Performed preliminary due diligence for an investment target in the Chinese elderly care industry.
- Collected data and compiled elderly care industry reports on demographic trends, insurance spending habits and incidence rate of chronic diseases.

Great Harvest Bread Co.

Oct 2019 - Nov 2019

Student Consultant Project

Charlottesville, VA

- Designed university marketing strategies and operation changes to help boost sales.
- Recommended findings to the CEO and CMO of Great Harvest Bread Co. and our solution was given the top award among four candidate solutions.
- Completed this project as part of the Strategy and Systems Project at McIntire School of Commerce, sponsored by Great Harvest Bread Co.

AWARDS

Silent Hoist and Crane Prize

May 2022

3rd place

Ithaca, NY

This prize is for outstanding completion of the Master of Engineering project at Cornell ORIE department.

Creative Shock Social Case Competition

Oct 2019

Top 10 Global Finalist

Vilnius, Lithuania

This prize is for providing top solutions to an international case competition focused on challenges in social businesses.

Cornerstone Research Case Competition

1st place

This prize is for submitting the best solution to an economic consulting case competition hosted by Cornerstone Research.

Sept 2018

Charlottesville, VA

CERTIFICATIONS AND TESTS

CFA Program (completed Level I)

Dec 2021

GRE General Test (Verbal: 168, Quantitative: 170)

June 2019

EXTRACURRICULAR ACTIVITIES

Burke Society

Sept 2017 - June 2018

Social Chair

Charlottesville, VA

Organized social gathering events such as literary nights for the literary society at University of Virginia.

Small Jazz Group

Sept 2017 - May 2019

Saxophonist

Charlottesville, VA

Performed in semi-annual jazz concerts that were open to the university community.