Tainon Chen

(U.S. Citizen)

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EDUCATION

Cornell University, College of Engineering, Ithaca, NY
Master of Engineering in Financial Engineering, **GPA: 3.90** **Expected December 2022**
Financial Data Science Certificate

University of Michigan, Ann Arbor, MI
Bachelor of Science in Electrical Engineering, **Summa Cum Laude, GPA: 3.76** **April 2021**
Minors in Computer Science and Mathematics
Awards: College of Engineering Honors Program, University Honors (2018-2021), Dean's List (2018-2021)

Selected Coursework: Machine Learning, Monte Carlo Simulation, Fixed Income, Intro to Stochastic Calculus, Web Systems, Python for Finance; *Currently*: Optimization Modeling in Finance, Statistical Data Mining, Investment and Portfolio Mgmt.

SKILLS

Technical: Python, C++, MATLAB, R, C, C#, Java

EXPERIENCE

Electrical/Software Engineer Intern, *Ford Motor Company,* Dearborn, MI **May to July. 2021**

- Researched and tested GPU (graphics processing unit) acceleration on Docker containers to increase performance and compatibility of software intended for connected vehicles
- Developed Python software to benchmark Docker container performance for different GPU hardware setups
- Analyzed performance data to provide recommendations for hardware use in future GPU container projects

Electrical/Software Engineer Intern, *Ford Motor Company,* Dearborn, MI **June to July. 2020**

- Researched and developed a procedure for implementing Docker into an experimental automotive-specific operating system (AGL: Automotive Grade Linux) for which no prior known solution existed
- Benchmarked Docker container performance on AGL vs. other operating systems to demonstrate AGL's feasibility
- Documented procedure for the developed implementation, which remains in use at Ford for AGL and Docker testing

Electrical/Software Engineer Intern, *New York City Transit,* New York City, NY **May to Aug. 2019**

- Developed and implemented a C# user interface to run tests and analyze results from a circuit board test fixture
- Wrote a script to automate a spreadsheet imputation task, shortening time by 90% compared to manual imputation

PROJECTS

Optimization Modeling in Finance: ORIE 5370, *Cornell University*, Ithaca, NY **Jan. 2022 to Present**

- Determining optimal bond portfolio from an input set of bonds, and reducing size of input set using PCA and clustering

Learning with Big Messy Data: ORIE 5741, *Cornell University*, Ithaca, NY **Sep. to Dec. 2021**

- Group project analyzing the impact of the COVID pandemic on stock performances across multiple sectors
- Cleaned out dataset consisting of COVID and stock data, and performed data analysis using Python to determine which COVID-based features were most impactful and to predict changes in stock prices from COVID data

Deep Video Deinterlacing with Channel Attention, *University of Michigan*, Ann Arbor, MI **Jan. to Apr. 2021**

- Recreated a recently published, neural network-based video deinterlacing architecture using PyTorch, and implemented attention to increase temporal information utilization of the neural network
- Trained and tested model using Vimeo90k dataset, which yielded noticeable improvement in resulting video quality

Origami-Based Photovoltaic Cells, *University of Michigan*, Ann Arbor, MI **Sep. 2018 to Apr. 2021**

- Designed and tested origami-based reflective concentrators to increase light collection of solar cells
- Developed and optimized MATLAB program to construct and simulate light collection in 2D and 3D solar cells

LEADERSHIP AND AWARDS

Project Lead: Real-time Voice Separation, BSE Capstone Project, U-Mich. **Jan. to Apr. 2021**
Eagle Scout Award, Boy Scouts of America **Aug. 2018**
Regeneron/Intel/Westinghouse STS National Semifinalist **Jan. 2018**

ACTIVITIES/INTERESTS

Violin; Hiking; Volunteering at campus events and fairs; Volunteering at K-12 events through TBP Engineering Honor Society