

Chao Peter Yang

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EXPERIENCES

Informa PLC/ Curinos, *Data Science Analyst II*

Aug 2021 – Current

- ◆ **Tuned non-linear price elasticity models** en masse for multiple major US banks, each with 10,000+ model segments, resulting in improved fit in terms of both AIC and RSQ with a significantly higher rate of convergence.
- ◆ Converted local, single threaded legacy modeling process to use **SparkR** and **HDFS** pipeline, reducing run time for model fitting by up to 30 times.
- ◆ Installed and managed more than 10,000 **price elasticity models** per client bank to predict and optimize their acquisition and other balance flows, allowing them to run precise predictions across a wider range of interest rates.

University of Michigan, *Honors Student Researcher*

Sep 2020 – May 2021

- ◆ Developed new music classification methods using Musical Instrument Digital Interface (MIDI) and **LSTM neural networks** resulting in 82% accuracy in music classification, more than 10% improvement over conventional **ML methods**.
- ◆ Improved models using supervised **machine learning methods** like **Support Vector Machines**, **Decision Trees**, **Ensemble Methods**, **K-nearest neighbors** etc.
- ◆ Culminated in the final Honors Thesis: *The Classical-Romantic Dichotomy: A Machine Learning Approach*, granting me the "Highest Honor" distinction in **Data Science**, one of only 2 awarded in 2021.

University of Michigan, *Student Researcher*

Jan 2021 – May 2021

- ◆ Planned and conducted research to gather acoustic data on modern and historical violin strings.
- ◆ Simulated the acoustic characteristics of different venues and demonstrated the environment's impact on perceived sounds via FFT using convolution reverb.
- ◆ Prepared the project proposal and obtained research funding from Prof. Joseph Gascho, as well as coordinated payments between vendors and funding agency through the Stearns Collection at the University of Michigan.

EDUCATION

University of Michigan - Ann Arbor, *B.S. in Hon.Data Science and Mathematical Sciences*

Aug 2018 - May 2021

- ◆ GPA: 3.65 / 4.0
- ◆ Honors: Highest Honors in Data Science (Top 2 in Department), University Honors (2019, 2021)
- ◆ Relevant Courses: Calculus, Linear Algebra, Statistics, Data Structures and Algorithms, Database Management Systems, Numerical Methods, Machine Learning, Mathematical Modeling in Biology, Programming and Data Structures, Introduction to AI

DATA SCIENCE PROJECTS

Data Science — Machine Learning, Summer 2020

- ◆ Predicted house prices based on real financial data from Kaggle with **supervised machine learning techniques**, resulting in a model performing in the top 20 percentile of the class.
- ◆ Performed feature analysis and selection on over 10 regression models, resulting in improved performance on the final mode.

Database — Facebook Database Clone, Spring 2020

- ◆ Implemented a relational database for storing user information of a simulated Facebook-like company using Java for easier query, in addition to a NoSQL database to increase its versatility.

Computer Science — Path Optimization

Winter 2020

- ◆ Developed a program that solves Traveling Salesmen Problem with heuristics and branch-and-bound approaches using dynamic programming in C++, reducing the solving time by more than 99.95

Terminal Command Game — Euchre, Fall 2019

- ◆ Implemented a C++ based game of Euchre that supports local PVP and PVC gameplay via terminal command, using object-orientated programming with custom classes.

TECHNICAL SKILLS

Data Science Languages: **SQL**, **R**, **Python**, C++, **Spark**, Javascript; **ML Techniques**: Supervised, Unsupervised, Clustering, NLP, Deep Learning; Tools: MATLAB (MIDI-Toolbox, Deep Learning Package), **MySQL**, **MongoDB**, Java SQL integration; Visualization: Matplotlib, ggplot, Tableau

Languages English (Professional), Mandarin Chinese (Native), Hungarian (Native), German (Intermediate), Japanese (Conversational)

Certificates DeepLearning.AI: Deep Learning Specialization, Generative LLM, Google: Share Data Through the Art of Visualization

Other Hobbies: Violin, Fencing, Calligraphy, Badminton, Tennis (HS Varsity)