

Roy Ma

Machine Learning Engineer

[[Codes](#)] · [roy.ma9@gmail.com] · [[Kaggle](#)]

Results-driven **MLE** with MITx credential in statistics and data science, Kaggle competitions expert ranked top 0.8% globally, skilled in building and deploying SOTA ML/DL solutions, adept at applying rigorous CS fundamentals and advanced ML algorithms to solve complex real-world problems. **FINRA**-designated finance executive with 10+ years of experience in business development, quantitative analysis, and financial modeling. **Founder** of an executive English training school, designed curriculum systems and delivered 600+ live sessions.

Technical Experience

Kaggle Competitions Expert, Global rank: top 0.8%

Competition **LLMs - You Can't Please Them All**, ranked top 3%

- Designed and implemented research-intensive code modules with iterative Bayesian chaining to deduce LLM behaviors without any explicit parameters.
- Work with a team of ML experts to develop complete solutions to evaluate template-, heuristic-, and optimization-based LLM manipulation injection attacks, iteratively deducing black-box LLM interpretability.
- Competition results: top 3%, silver medal awarded.
- **Technologies used:** `Pytorch`, `Transformers`, `Sklearn`, `XGB`

Competition **Jane Street Real-Time Market Data Forecasting**, ranked top 6%

- Independently developed and pretrained a financial forecasting model with real-time online model finetuning.
- Designed an extensive data/feature engineering pipeline, ensuring minimal training noise, and efficient signals detection.
- Developed extensive QA codes, and parameters tuning, designed and deployed efficient cloud-based training optimization workflows.
- Competition results: top 6%, bronze medal awarded.
- **Technologies used:** `Pytorch`, `Tensorflow`, `XGB`, `LGBM`, `CATB`, `Sklearn`, `Polars`

Competition **Santa 2024 - The Perplexity Permutation Puzzle**, ranked top 5%

- Independently designed and developed efficient simulated annealing algorithms to solve LLM black-box optimizations in the $9e157$ magnitude.
- Pretrained a DNN to probabilistically filter evaluation candidates resulted in saving over 90% compute resources spent on LLM forward passes.
- Competition results: top 5%, bronze medal awarded.
- **Technologies used:** `Pytorch`, `Sklearn`, `Simulated Annealing`, `Genetic Algorithm`

MicroMasters in Statistics and Data Science, MITx

- Earned the MITx MicroMasters in Statistics and Data Science, through a full-time year-long program spanning over 4 MIT graduate-level equivalent courses,

including probability, statistics, machine learning, and computations in data analysis.

- Built solid practical transferable ML engineering skills, including data, features, modeling, deployment and stakeholder reporting.

Professional Experience

Business English Instructor, Founder

2022 - 2025, Beijing, China

- Taught over 600 hour-long live sessions.
- Oversaw 57 student programs over 2 years, instructed university professors, fortune 500 executives, and partner lawyers.
- Independently developed and authored full curriculums tailored to each student's unique professional backgrounds.

Director of Business Development, Cleveland International Fund

2017 - 2019, Cleveland, OH, U.S.

- FINRA-designated securities professional with a proven track record in capital raising and investor relations.
- Led the BD team to successfully close six private placement offerings, raising over \$370M for commercial real estate developments in the U.S. Midwest markets.
- Managed relationships with 300+ accredited investors, securing new business opportunities and negotiating strategic partnerships.

Head of International, Multibank Exchange Group

2016 - 2017, Beijing, China

- Led a cross-functional team of 30+ finance professionals, overseeing all aspects of the international department.
- Exceeded executive strategic targets while managing brokerage operations and hedge fund products, including research, market analysis, sales, and business development.

Skills

Supervised Learning Unsupervised Learning Deep Learning LLM Reinforcement Learning
Time Series Data Engineering Feature Engineering

Machine Learning: PyTorch, TensorFlow, Sklearn, Transformers, XGB etc.

Data Engineering: SQL, Polars, Pandas, ETL

MLOps: Docker, FastAPI, Git

Languages: Python, TypeScript, Matlab, Latex

Certificates and Languages

English - Native

Mandarin - Native

Japanese - Business Conversational

FINRA, Series 63 - Uniform Securities State Law

FINRA, Series 82 - Private Securities Offerings Representative

Previous Professional Experiences

Director (China), Great Texas Fund, 2010 - 2016, Houston, U.S.

Operations Manager, Carhart llc., 2009 - 2010, Chicago, U.S.

Legal Assistant, Kalik Lewin, 2008 - 2009, Washington D.C., U.S.

Education

M.M., Statistics and Data Science, MITx

B.A., Economics, University of Maryland