Mingyuhui (Jane) Liu

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OBJECTIVE

With financial technology experiences in a leading asset management company, and as the top of class in Data Analytics, my goal is to become a quantitative/technology analyst in **Financial Industry.**

EDUCATION

George Washington University, School of Engineering and Applied Sciences — **Washington, D.C.**
- Master of Science in Data Analytics, GPA: 3.95/4.0 — Expected 05/2019

Duke University, Nicholas School of the Environment — **Durham, NC**
- Master of Environmental Management, GPA: 3.65/4.0 — 05/2017

Xi'an Jiaotong University, School of Energy and Power Engineering — **Xi'an, Shaanxi, China**
- Bachelor of Engineering, GPA: 3.56/4.0 — 06/2015

Data/Math Courses: Applied Machine Learning (**Python**), Database Mngmt (**SQL/NoSQL**), Bayesian Inference (**R**), Data-Driven Decisions (Experiment design), Statistics and Probability Theories

Finance Courses: **CFA I** Candidate, Bloomberg Certification, Portfolio Management, Finance, Microeconomics

SKILLS

Database Management: Oracle SQL Developer, Spark (PySpark), AWS, MongoDB, Neo4j
Programming/Systems: Python (SKLearn, **Keras,** etc), R, HTML, VBA, Unix
Statistics/Modeling: Machine Learning (SVM, KNN, etc.), **NLP** (NLTK, LDA), **Neural Networks**, Statistics (PCA, etc.)

EXPERIENCE

Pacific Investment Management Company (PIMCO) — **Newport Beach, California**
Summer Analyst, Trading Strategy Team-Technology Department — 06/2018 – 08/2018
- Improved bond liquidity prediction accuracy by **37%** compared to Bloomberg's model:
  - Programmed **Oracle SQL Developer** to extract and transformed bonds information;
  - Identified benchmark bonds by TRACE volumes and year to maturity, and used **Python** to engineer features;
  - Constructed Random Forest, Gradient Boosting Trees, a 3-layers' Neural Networks in Python to predict the benchmark bonds, tuned hyperparameters with **Bayesian Optimizer** on cross-validated F1 scores;
  - Self-defined an optimization to increase the precision by 4% after identified reasons for low scores from the model;
- Built up a **User Interface** for Credit Analyst Team with Python embedded **Excel VBA** (PyPimco)**:**
  - Utilized **AutoSys** to schedule Python execution based on user inputs extracted from Excel VBA;
  - Constructed new models based on inputs and automatically generating reports.

Duke Start-up Challenge: The Walla App, GenieUs, Inc. — **Durham, NC**
Management team — 02/2016 – 05/2016
- **Incorporated GenieUs, Inc.**, and managed the seed and development stage of the company:
  - Built the business model for GenieUs, Inc., and campaigned for an alpha attracting 300+ participants;
  - Developed **cash flow and revenue projections** with $5.7 million end cash of 5th year;
  - Pitched the business model to angel investors.

Analytical Projects: Big Data Analytics & Business Intelligence Practicum — **Washington, D.C.**
Researcher, presenter; — 09/2017 – 05/2018
- Bank deposit subscription prediction:
  - Predicted client deposit subscriptions with an **83%** accuracy:
  - Stored data in **MySQL** database, with client ID as the primary key;
  - Read in data from SQL with Python, and performed **PCA** to select features;
  - Performed Random Forests, MaxEnt and **Support Vector Machine** (SVM) to predict, and compared models;
- Capital Bikeshare Profit Growth Strategy:
  - Programmed Python to perform on rental counts over variables of interest;
  - Optimized the regression model with PCA and detected outliers with **Empirical Covariance** and **One-class SVM**;
  - Fitted the SVM model with kernels, and tuned with **GridSearch**;
  - Based on **40% less demand elasticities**, promoted strategies to switch customer emphasis.

LEADERSHIP

Vice President: The George Washington Consulting Club, Washington, D.C. — 10/2017 – Present
Intern Board: United Nations Economic Commissions for Europe, Geneva, Switzerland — 05/2017 – 08/2017
Captain/Director: Documentaries for Environmental Studies, Durham, NC — 01/2017 – 04/2017
Official/Referee: Duke Recreation & Physical Education, Durham, NC — 05/2016 – 04/2017