

# Yuan (Tobey) Tian

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## SKILLS

**Analytical Tools:** Python, R, SQL, BigQuery, Tableau, BI Tools, Excel/VBA, Google Analytics, SAS, Salesforce, MATLAB, STATA

**Technical Skills:** Machine Learning, Financial Modeling, Data Wrangling and Visualization, A/B testing, Predictive Modeling, Natural Language Processing and text analytics, Time Series Analysis

**Certificates:** CFA Level III Candidate, CICPA (Chinese Institute of Certified Public Accountants)

## EDUCATION

<b>Brandeis University</b>	Waltham, MA
<b>Master of Science in Business Analytics (STEM-Designated)</b> , GPA: 3.87/4.00	09/2020 - 12/2020
<b>Nankai University</b>	Tianjin, China
<b>Master of Economics</b> , GPA: 3.80/4.00	09/2015 - 06/2017
<b>Bachelor of Economics</b> , GPA: 3.85/4.00	09/2011 - 06/2015

## RELEVANT WORK EXPERIENCE

<b>Pension Reserves Investment Management (MASS PRIM)</b>	Boston, MA
<b>Quantitative Research Intern</b>	10/2020 - present

- Simulated asset class returns and made allocation plan for the \$75 billion PRIT Fund through PCA and Black-Litterman Model; Maintained quantitative models in MATLAB to identify risk exposures and managers' ability to generate alpha
- Collaborated with board members in the enhancement of strategic allocation and private equity replication research

<b>Elphi, Inc.</b>	Boston, MA
<b>Data Analyst Intern</b>	05/2020 - 08/2020

- Initiated machine learning algorithm project on GCP for predicting conversion rates of mortgage loan applications using Python Scikit-learn and Tensorflow (Logistic, Random Forest, Gradient Boosting and XGBoost), reached 91% validation accuracy; Created Kubeflow Pipeline to achieve systematic automation, decreased prediction steps and time by 30%
- Coordinated business and IT managers to define data requirements, preprocessed real data from Firestore using BigQuery; Integrated algorithm into online database that highlighted in the company's SaaS product
- Generated and presented Tableau visualizations on key indicators to business team and stake holders

<b>National Association of Financial Market Institutional Investors (NAFMII)</b>	Beijing, China
<b>Quantitative Financial Analyst</b>	05/2017 - 05/2019

- Accomplished 15 quantitative bond issuance analysis projects with advanced Excel and VBA, yielding \$2.37 billion
- Established enterprise bond risk evaluation criteria and methodologies, presented 18 surveillance and ad-hoc Power BI interactive reports on risk management, improved risk management efficiency by 15%
- Led 6 qualitative and quantitative analyses on existing investment strategies, economic conditions and capital market

<b>China Universal Asset Management Co., Ltd.</b>	Beijing, China
<b>Business Analyst Intern</b>	06/2016 - 09/2016

- Created weekly dashboards and reports on Salesforce to track KPIs and sales of each salesperson in 5 branches
- Implemented statistical modeling and A/B testing using R on sales data and marketing strategies to support 10 funds' releasing activities, increased sales amount by 17% and new customer rate from 5% to 12%

## ACADEMIC RESEARCH PROJECTS

<b>Brandeis University Data Analyst Research Assistant (R, Python, SQL)</b> <a href="#">[Project]</a>	05/2020 - 08/2020
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- Established cleaned data table for analyzing by extracting and merging unstructured data from a variety of sources for over 10 years; Completed data wrangling and feature engineering on Python
- Developed supervised regression models and cluster analysis to predicted new lung cancer rate based on air quality, finalized model through stepwise selection and cross-validation, illustrated featured predictors and prepared manuscript

<b>Forecasting Economics Data with Time Series Analysis (R)</b> <a href="#">[Project]</a>	04/2020
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- Performed time series analysis and fit ARIMA and Holt/Winter Filter forecasting models based on analysis of GDP data structure and statistical test results, made in-sample and off-sample growth prediction and measured performance

<b>Airbnb Data Mining &amp; <a href="#">Visualization</a> (Python)</b> <a href="#">[Project]</a>	11/2019
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- Led a team of 4 to conduct expletory analysis, geography pattern visualizations, multivariate regression analysis and machine learning(Lasso, Support Vector, Random Forest) for Airbnb listing prices in Boston area, reached 81% accuracy

<b>Grocery Consumer Behavior Big Data Analysis (SQL)</b> <a href="#">[Project]</a>	11/2019
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- Explored 40 million observations, enhanced consumer behavior analysis through queries and window functions

[Links to other analytical projects]: [Sentiment Analysis\(R\)](#); [Healthcare Insurance Claims Data Analysis\(R\)](#); [Portfolio Financial Modeling\(Excel, VBA\)](#); [Information Visualization Project\(Tableau\)](#)