

MIKE CHOI, CFA

DATA SCIENTIST AND ANALYST

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Education

The Wharton School of the
University of Pennsylvania
BS Economics with Minor in
Business Statistics 2012

Skills

PYTHON

Pandas
Numpy
Scikit-learn
NLP tools
Keras
BeautifulSoup
Selenium
Streamlit
Flask

MACHINE LEARNING

Linear Regression
Classification
Clustering
Natural Language
Processing
Neural Networks

DATABASES

PostgreSQL
MongoDB

DATA VISUALIZATION

Matplotlib
Seaborn
Tableau

FINANCIAL TOOLS

Bloomberg
Capital IQ
FactSet
Advent Portfolio Exchange
Moxy

Experience

Metis

Data Scientist

New York
Jan. 2021 to Current

Completed an immersive 12-week data science bootcamp. Project highlights include:

Predicting soccer players' transfer market values based on player stats:

- Performed feature selection through Lasso coefficients and selected Ridge regression model through K-fold cross-validation (adjusted R^2 of 0.63).
- Produced a list of recommendations for a club's scouting team based on the interpreted results.

Predicting mutual fund outperformance / underperformance vs. S&P 500:

- Applied various feature selection methods and classification algorithms to predict whether a mutual fund will outperform or underperform the S&P 500 index, with emphasis on f1-score (0.90 test score using a Random Forest model).
- Interpreted the model results to answer the question of whether one should put money in the hands of stock-pickers or index funds. Created a web app of the prediction model using Flask.

Investigating Microsoft's transformation under Satya Nadella using NLP:

- Preprocessed text from earnings call transcripts using NLTK, SpaCy, and Gensim.
- Used topic modeling, sentiment analysis, and word embeddings to analyze how Microsoft's philosophy, strategy, and culture evolved under new CEO Satya Nadella and why he was able to lead a successful turnaround at the company.

Recommending YouTube videos to beginners in stock investing:

- Scraped video text data from YouTube pages using Selenium and BeautifulSoup.
- Used topic modeling, Word2Vec embeddings, and sentiment analysis to filter out videos with no educational value.
- Created a two-step content-based recommender inside a Streamlit app and deployed via Heroku.

KG Funds Management

Senior Research Analyst

New York
Sept. 2019 to Dec. 2020

- Worked in a six-person team, investing in companies from Payments, E-Commerce, and Software sectors that are leading the secular growth in cloud, machine learning, and data analytics.
- Performed deep-dive research and analysis on the covered companies, building financial and statistical models on multi-year revenue projections, cost/margin analysis, and IRR optimization.
- Collected and preprocessed large datasets on credit card data, E-commerce transactions, and software pricing data, conducting analysis using Tableau and other visualizations.
- Presented stock recommendations, data analysis conclusions, and market forecasts to the investment team weekly.

Hawkeye Capital Management

Senior Research Analyst

New York
Apr. 2018 to Aug. 2019

- Conducted research on a concentrated portfolio of stocks, spending months on a single company collecting data from various sources, interviewing management and experts, and distilling the information into valuable insights.
- Built complex financial models, including financial statement forecasts, expense analysis, and IRR computations.
- Presented stock recommendations and market views to the investment team on a weekly basis.

Alleghany Corporation

Research Analyst

New York
Mar. 2013 to Mar. 2018

- Performed research on companies in Payments and Banking sectors in a five-person team.
- Saved the company 30% in back office costs by implementing automated fund administration and accounting system.
- Presented new investment ideas, research on existing portfolio companies, and macro analyses to the CEO of Alleghany Corporation during weekly investment committee meetings.
- Prepared quarterly corporate-level presentations on the fund's investment strategy for Alleghany's Board of Directors.