

# TINH CAO

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As an avid artificial intelligence and data analyst, I have delivered data-driven insights through Python and R that transformed decision-making and generated quantifiable business impact. My passion for business insights and revenue growth through data-driven solutions makes me a results-driven candidate who can be trusted to boost competitive edge and accelerate innovation for global corporations.

## Education

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**Illinois Institute of Technology** | Chicago, IL

August 2021 – August 2023

- Master of Data Science

**North Central College** | Naperville, IL

August 2016 – May 2020

- B.S Actuarial Science; B.S Computer Science; B.S Finance

Coursework: Inference statistics; Introduction to Time Series; Project Management; Monte Carlo Methods in Finance; Design and Analysis of Algorithm; Machine Learning; Big data Technologies; Computational mathematics.

## Experience

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**Cook's County Treasurer Office** | Chicago, IL

May 2023 – August 2023

**Data Science Practicum Student**

- Spearheaded an artificial intelligence and machine learning initiative to transform property tax predictions, drafting the full project proposal and timeline for the innovation.
- Led a high-performing team of 5 IIT's students, managing outcomes through rigorous project management. Conducted weekly presentations to drive quality assurance and stakeholders updated.
- Reconciled conflicts between model outcomes and target goals through analytical troubleshooting. Conducted thorough test to ensure model dependency on client's end.
- Implemented a random forest model that yielded a 0.81 accuracy score and 0.71 precision, generating quantifiable business impact. The combined predictive models are estimated to save 40% in annual administrative costs.
- Acted as the central liaison between technical and leadership teams to accelerate execution. Clearly translated data science insights into executable solutions for stakeholders.

**Sun Life VN** | Ho Chi Minh city, Vietnam

October 2020 – July 2021

**Valuation Intern**

- Support systematic, ad-hoc, and financial needs for internal reports by streamlining and implementing data processing methods in Python and SQL.
- Collaborated and initiated improvement on existing policies to reduce computing load on report generating.
- Coordinated with Strategy, Product, and Marketing team to assess the effectiveness of new launch product for internal and external stakeholders.

## Projects

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- **Italian Oil Price Prediction Using Time Series Model:** Executed a comprehensive data analysis project focused on forecasting Italian oil prices using a SARIMA model in R and Python. Leveraged ACF and PACF analyses to detect underlying trends and seasonality, yielding results with a MAPE of 10.68% and an RMSE score of 86.09.
- **Analyzing Spotify Hit:** Led initial data exploration and initial analysis. The result was narrowed and visualized with 5 variables since it yielded highest accuracy score 71.5% among all models used (PCA; Basic Decision Tree; Random Forest).
- **Review Classification Model using Gated Recurrent Unit:** The project focused on classifying the review of the application based on a 1 to 5 by examining the semantic layer of the word corpus. The model achieved 76.6% accuracy.
- **Stock Portfolio Optimization S&P600/XLK in R:** Maximized investment portfolio's revenue and ROI by strategically distributing marketing budget across the most promising channels using log-return and CAPM criteria (Annualized alpha).

## Skills | Additional Info

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- Programming Languages: Python, MySQL, R.
- Other tools/ Libraries: Tableau, Jupyter Notebook, MATHLAB, Microsoft Office(Word,Excel,Powerpoint).
- North Central College: Co-founded student managed investment fund with a successful \$10,000 fund raising; President of Asian Konnection Club to promote culture and diversity on campus.