

# Will Nahley

Chicago, IL · (615) 788 - 0065 · [wnahley@uchicago.edu](mailto:wnahley@uchicago.edu) · [LinkedIn](#) · [GitHub](#)

---

## EDUCATION

---

### The University of Chicago

Chicago, IL

*Master's in Computational and Applied Mathematics*

Jun 2025

- Relevant Coursework: Machine Learning, Applied Partial Differential Equations, Nonlinear Optimization, Applied Linear Algebra, Scientific Computing with Python, Introduction to Probability Models

### Southern Methodist University, Cox School of Business

Dallas, TX

*Bachelor of Business Administration, Finance; Minor in Computer Science*

May 2023

- Cumulative GPA: 3.89/4.00; *cum laude*
- Relevant Coursework: Derivatives, Investment Analysis and Portfolio Management, Data Structures, Algorithms, Discrete Computational Structures, Multivariable Calculus, Linear Algebra, Statistics
- SMU's 107<sup>th</sup> Student Senate: Senator and Finance Committee Member
- Sigma Alpha Epsilon: Rush Chair, Expansion Committee Member, and Executive Board Member

## SKILLS

---

Python, C++, MATLAB, SQL, Java, Linux, Git, NumPy, SciPy, sklearn, pandas, Matplotlib, TensorFlow/Keras, PyTorch, CMake, Catch2, RapidJSON, Unit testing, Excel, MS Office

## EXPERIENCE

---

### Goldman Sachs

Richardson, TX

*Consumer and Wealth Management Summer Analyst*

Jun 2022 – Aug 2022

- Collaborated with Deposits, Lending, Apple Card, and GM Card teams within the firm's consumer arm to document their processes in Workforce Management
- Produced over 20 SOPs, or "Playbooks", to help ensure that new hires and current analysts alike are following the correct procedures to complete their tasks efficiently and effectively
- Constructed and pitched a "Next Generation Rewards Program" to senior management in the Product team

### NexPoint

Dallas, TX

*Real Estate Finance Summer Intern*

Jun 2021 – Jul 2021

- Revamped the hospitality REIT's performance workbook to track portfolio data against pre-COVID levels
- Developed Excel data and graphics within the accounting team for the Q2 MD&A
- Exercised due diligence for the single-family rental REIT to model and research potential new properties

## ACADEMIC RESEARCH/PROJECTS

---

### The University of Chicago

*Research Project (Prof. Anjali Nair): Stochastic Differential Equations, Wave Propagation*

Jun 2024 – Present

- Studied B. Øksendal's *Stochastic Differential Equations* and C. Gardiner's *Stochastic Methods*
- Implemented Euler-Maruyama simulations for OU, GBM, and other stochastic processes in Python
- Currently reading *Laser Beam Propagation through Random Media* (Andrews, Phillips)

*LSTM Sentence Prediction Project (seq2seq): Python*

May 2024

- Implemented a custom LSTM class to create an Encoder-Decoder model to predict a follow-up sentence given a source sentence with training data consisting of ~ 6000 sentence pairs
- Packages/libraries used: NumPy, PyTorch

*Index Price Prediction Project: Python*

Dec 2023

- Examined linear regression, polynomial fitting, and autoregressive integrated moving average models to generate price expectations for 14 global stock indices in our final group project in scientific computing
- Packages/libraries used: pandas, NumPy, sklearn

### Southern Methodist University

*AVL Tree Search Engine: C++*

Feb 2022

- Implemented document, query, search, and ranking processors that index 300k financial news articles
- Parsed articles into an inverted file index consisting of 3 AVL trees of words, organizations, and people