

# Siddhartha Lewis-Hayre

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## EDUCATION

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**Yale University**, New Haven, CT 2018-2022

*B.S. Mathematics* (3.8 GPA)

*Senior Thesis:* A Heuristic for the Network Design Problem with Steiner Points, advised by Prof. Aleh Tsyvinski and Prof. Richard Kenyon

*Relevant Coursework:* General Economic Theory: Microeconomics (PhD), General Equilibrium Theory, Mathematical Game Theory, Econometrics, Introduction to Probability and Statistics, Introduction to Functional Analysis, Measure Theory and Integration, Intro to Abstract Algebra, and Real Analysis

**George Washington University**, Washington, DC 2023-2024

*Non-Degree* (3.85 GPA). *Relevant Coursework:* Macroeconomic Theory I & II (PhD)

## EXPERIENCE

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**Board of Governors of the Federal Reserve (Research Assistant)** 2023-Present

- Worked on Klee, Morse, Shin (2024), Auto Finance in the Electric Vehicle Transition
  - Implemented various estimators including Borusyak and Hull (2023)
  - Created loan performance metrics by analyzing loan-level monthly cash flows
  - Studied electric loans in Auto ABS and programmed payment waterfall yielding z-spreads
- Researched private credit and its potential risks to financial stability
  - Studied bank involvement in private credit and writing FEDS note with Berrospide, Cai, and Zikes
  - Wrote monthly news memos to Financial Stability Divisions' Officers and Section Chiefs
  - Created and analyzed novel datasets using advanced programming techniques
- Contributed to Financial Stability Report and monitoring of asset managers' financial stability risks
- Studied contagion in debt network and helped with revision to Chang (2022)

**Ellington Management Group (Research Analyst)** 2022-2023

- Built credit risk model for Credit Risk Transfers and relative value screener
- Created risk model for leveraged loans and extended it to be used in signal trading
- Updated machine learning risk model for CLOs and productionized model
- Worked on firm's strategy for hedging systematic risk by simulating different hedging strategies

**Ellington Management Group (Summer Analyst)** Summer 2021

- Researched how much cash to save as "dry powder" for investment opportunities
- Created mathematical framework to determine when to take opportunities and wrote paper on findings
- Analyzed trade data to determine how frequently investment opportunities arise and how much they return

**Polymath REU Program (Research Experiences for Undergraduates)** Summer 2020

- Researched an open question in graph theory with Yale's Gibbs Assistant Professor Patrick Devlin

**Alexis Prep** 2020-2021

- Tutored primary and secondary school students in mathematics, economics, and SAT preparation

## COMPUTER SKILLS AND LANGUAGES

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- Programming languages: Python, STATA, R, SQL, C, and Racket
- Advanced Spanish