VARUN VARANASI

919-619-4843 ⋄ varun.varanasi@yale.edu ⋄ https://www.varun-varanasi.com/

EDUCATION

Yale University *August 2020 - Present*
B.S. Intensive Physics (Major GPA: 3.9), B.A. Statistics + Data Science (Major GPA: 3.9) GPA: 3.8
Relevant Coursework: Data Structures, Theory of Statistics, Bayesian Statistics, Data Analysis, Machine Learning, Real + Complex Analysis, Classical Mechanics, Electrodynamics, and Quantum Mechanics

WORK EXPERIENCE

Strategy Consulting @ Benjamin Maurice LLC *July 2021 - July 2022*
- **Projects:** P.E. Due Diligence, FinTech Growth Strategy, and Manufacturing Market Penetration
- **Contributions:** Wrote, managed, and analyzed two 60+ question market surveys, modeled 5 year cost-revenue projections, designed 20+ client-ready slides, and analyzed 40+ expert interview transcripts
- **Skills:** Financial modeling, product positioning, market research, competitve landscape analysis, expert interviews, survey design and analysis (consumer and expert), slide design, client and 3rd party communication

Data Science @ Lantern Pharmaceuticals *May 2021 - August 2021*
- **Projects:** Developed a feature selection algorithm for Lantern's proprietary drug development pipeline
- **Contributions:** Identified/implemented 3 correlation-based feature selection methods, modularized 10+ python scripts for use in a data pipeline, and evaluated CodeOcean environment for company use
- **Skills:** Python, CodeOcean, data analysis, correlation, and feature selection

RESEARCH EXPERIENCE

Theoretical Biology, Yale University *January 2023 - Present*
PI: Prof. Jun Korenaga
- **Projects/Contributions:** Developed a python-based model/simulation to study the dynamics and emergence of autocatalytic reaction networks in pre-biotic chemical models
- **Skills:** Python, machine learning, and network analysis

Quantitative Finance Research, Yale University *March 2021 - Present*
PI: Gregory Laughlin
- **Projects:** Modeling S&P500 index volatility based on metrics of fear/uncertainty in the population
- **Contributions:** Designed and tested backtrading schemes to evaluate the predictive power of fear metrics on S&P500 volatility, and data scraped and conducted time series analysis on VIX, VXX, and Metaculus user data
- **Skills:** Python (BackTrader), algorithmic trading, data analysis, time series analysis

Chemical Engineering, North Carolina State University *June 2017 - May 2020*
The Dickey Group, PI: Prof. Michael Dickey
- **Projects:** Created liquid metal thin films for applications in self-healing circuits and polymer encapsulated liquid metal droplets
- **Contributions:** Identified and designed novel experimental procedure for liquid metal deposition, optimized experimental efficiency, and conducted literature reviews
- **Skills:** Nanoparticle synthesis, electrophoretic deposition, and microfluidics

AWARDS

2nd Place in Citadel Securities' Summer DataOpen *July 2022*
- Evaluated market inefficiencies in LendingClub's peer-to-peer lending market place

Top 1% in COMAP's Highschool Mathematical Modeling Challenge *November 2019*
- Developed agents-based models to predict the economic impact of charging devices in public spaces

Top 2% in Mathworks Mathematical Modeling Challenge *February 2020*
- Modeled the adoption of electric trucks and infrastructure into the long-haul trucking industry

SKILLS

Languages: Spanish (Intermediate), Telugu (conversational), and Mandarin (Beginner)
Technical Skills: Python, R, C, functional programming, and the Microsoft Suite