**Louis B. Viglietta**

[**louisv@princeton.edu**](mailto:louisv@princeton.edu) **| (631) 316-9382 | Princeton, NJ |** [**louis-vig.github.io/louisviglietta/**](https://louis-vig.github.io/louisviglietta/)

**EDUCATION**

**Princeton University** |Princeton, NJ *June 2024*

* B.S.E. in Computer Science
* Cumulative GPA:3.982
* Relevant Coursework:Data Structures and Algorithms, Machine Learning, Probability & Statistics, Optimization

**SKILLS**

**Technical:** OOP (Java, C#, Python), Data analysis (Python, R, MATLAB), Linear optimization (Python, NumPy, CVXPY), Basic web design. (HTML, CSS, Bootstrap 5), Git/GitHub, GraphQL APIs

**Languages:** English (native), Spanish (advanced)

**EMPLOYMENT EXPERIENCE**

**Software Engineering Intern** *Summer 2022*

BaseCap Analytics | New York, NY (remote)

* Developed tagging feature for company platform, allowing clients to organize, sort, and filter items, by editing GraphQL web API endpoints and writing backend code in C#
* Designed migrations in SQL to alter database schema, enabling work on 2 new features and refactoring of backend
* Communicated with support and business staff regarding design requirements to work on 2 client-requested features
* Troubleshot issues by debugging code, reading documentation, and collaborating with team members

**Summer Research Intern** *Summer 2021*

Princeton University | Princeton, NJ

*“Computational design of microbial metabolism to improve ethyl acetate production”*

* Predicted growth rate and ethyl acetate production capacity of yeast strains *in silico* by optimizing genome-scale metabolic models in MATLAB, allowing for more efficient study *in vivo*
* Identified 2 candidate genetic modifications in yeast that could increase ethyl acetate production and allow for uptake of additional substrates by adding heterologous pathways to the model
* Introduced *in silico* study to lab group by demonstrating computational techniques and presenting results

**Student Tutor** *January 2021 – present*

McGraw Center for Teaching and Learning | Princeton, NJ

* Instruct groups of 10-20 students in multivariable calculus and/or general physics by teaching problem-solving strategies, answering questions, and clarifying fundamental concepts

**SOFTWARE PROJECTS**

***See*** [***website***](https://louis-vig.github.io/louisviglietta/) ***above for more info***

**Chess Game** *December 2021*

* Implemented chess game in Java, self-taught Swing/AWT APIs to create GUI and visuals

**“Game of Life” Simulator** *December 2021*

* Developed interactive simulation of Conway’s “Game of Life” in Java using Swing/AWT

**Tweet Generator** *May 2020*

* Created program that models speech patterns in an individual’s tweets and generates new, synthetic tweets using Markov chains – earned gold medal at Long Island Math Fair (Python, NumPy)

**EXTRACURRICULARS/LEADERSHIP**

**First College Council Treasurer** *September 2021 – May 2022*

* Meet with executive board to plan out weekly events with 40-80 participants and larger events with 150+ participants
* Communicate with vendors, purchase supplies, and file expense reports to keep track of expenses for council events

**AWARDS**

**Shapiro Prize for Academic Excellence** *Fall 2021*

* Prize awarded based on academic performance and range/difficulty of academic program