

# ELLIOTT YOON

440.840.8549 ◇ [elliottyoona@u.northwestern.edu](mailto:elliottyoona@u.northwestern.edu)

## Education

### Northwestern University

Evanston, IL (September 2021 - )

Bachelors of Mathematics

- 4.00/4.00 CS GPA; Dean's List 2021-22. Award for Excellence in Mathematics by a First-Year Student 2022
- Relevant coursework: Data structures & Algorithms, Computer Systems, Web Development, Object-oriented Programming, Functional Programming, Imperative Programming in C/C++

## Experience

### Union Home Mortgage

Strongsville, OH (May 2022 - )

Data Engineering Intern

- Scripted data warehouse ingestion and transformation of files from Azure Data Lake with Python and Databricks.
- Created data factory pipelines to automate ETL processes. Wrote SQL queries to unit test existing pipelines; validated and deprecated existing pipelines accordingly.
- Facilitated drilldown reporting by designing both relational and non-relational models in the data warehouse.

### Correlation One (DS4A)

Remote (February - August 2021)

Data Science Fellow

- Performed statistical analysis (correlation analysis, chi-squared tests, and regression models) on extracted time series aggregate data to analyze relationship between Amazon deforestation and socioeconomic health of Brazilian states; see *Correlating Brazilian Deforestation and Economics* below.
- As team leader, coordinated meetings and oversaw group of 5 fellows.

## Personal Projects

### 2048 Racer — Javascript, Go

(June 2022 - )

- Developed web application that allows users to test game AI's or race one another in the popular game 2048.
  - Built front-end web application in **React** (Javascript) and back-end web server with **Gorilla** (Go).
  - Developed AI to beat the game using **minimax** backtracking algorithm with **alpha-beta pruning**.
  - Utilized **Websockets** to enable real-time communication between the client browser and backend web server.
  - Deployed React app with Vercel and back-end web server with an **Nginx reverse proxy** and **Docker**.

### Pineapple Pics — Javascript, Python, SQL

(March 2022 - June 2022)

- Developed full-stack RESTful Instagram clone built using an MVC design pattern.
  - Built **REST API** endpoints on a **Flask** web server to handle requests; automated API testing with Python.
  - Utilized **React.js** to render data from a **PostgreSQL** database via the **Flask** server REST API endpoints.
  - Authenticated users using cookies and **JSON web tokens**.

### C++ Games — C++

(March 2022)

- Created an FPS aim-training application and a Reversi clone using OOP principles and MVC design patterns.

### Correlating Brazilian Deforestation and Economics — Python, SQL

(March - August 2021)

- Performed data cleaning with **Pandas** and SQL, visualization with **Seaborn/Matplotlib**, and analysis using **scikit-learn** and **Scipy**. Formalized results in Tableau dashboard and written executive summary.
- Reported final analysis and insights to an audience of over 1000 people.

Github (<https://github.com/elliottyoona/>)

Portfolio Website (<http://elliottyoona.github.io>)

## Technical Skills

### Libraries

MatPlotLib, NumPy, Pandas, Seaborn, Tensorflow

### Languages

C, C++, Golang, Javascript, Java, Python, Racket, SQL, x86 Assembly

### Technologies

Bash, Docker, GDB, Git, Heroku, Linux, Microsoft Azure Cloud

### Web Development

HTML/CSS, Flask, React, PostgreSQL, Websockets