

# ELLIOTT YOON

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## 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 SQL stored procedures and user-defined functions to optimize SQL Server triggers.
- Built data factory pipelines to automate ETL processes. Wrote SQL queries to unit test existing pipelines.
- Facilitated drilldown reporting by designing both relational and non-relational models in the data warehouse.
- *Worked with Microsoft **SQL Server** Management Studio and **Azure Cloud** (Data Factory, Data Lake, Synapse).*

### 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 data to analyze relationships between Amazon deforestation and socioeconomic health of Brazilian states.
- As team leader, coordinated meetings and oversaw group of 5 fellows. Formalized results in written executive summary and reported final analysis and insights to an audience of over 1000 people.

## Personal Projects

### 2048 Racer — Javascript, Go

(June 2022 - )

- Developed web application that allows users 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 **minimax** backtracking algorithm with **alpha-beta pruning** that successfully beat the game.
  - 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)

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

### Portfolio Website — <https://elliottyoona.github.io>

- Vanilla HTML, CSS, & Javascript website to showcase selected portfolio projects and design skills.

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

## 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