

# Justin Nguyen

justinn123123123@gmail.com

(301) 820-8347

Portfolio

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## Education

University of Maryland, College Park, MD

B.S. in Computer Science — Specialization: Data Science

Expected: Dec 2025

University Honors — GPA: 3.76 — Dean's List

**Relevant Coursework:** Computer Systems, Programming Languages, Algorithms, Data Science, Machine Learning, Artificial Intelligence, Human-Computer Interaction

## Technical Skills

**Languages:** Python, Java, C, C++, Rust, OCaml, MATLAB, SQL, JavaScript, TypeScript, HTML, CSS

**Frameworks/Libraries:** React, Flask, Pandas, NumPy, Scikit-learn, Scikit-Surprise, BeautifulSoup, LangChain

**Tools:** Git, Docker, Bitbucket, Jira, Figma

## Professional Experience

Precise Software Solutions, Rockville, MD

May 2022 – Aug 2022

*Development Intern*

- Built internal website using **HTML**, **CSS**, and **JavaScript** as part of the Sapfonte initiative.
- Contributed code through **Jira**-tracked tasks and collaborated on feature implementation with the development team.
- Participated in company-wide demo, presenting the final product to 100+ employees.

## Projects

**UMD Professor Summarizer**

June 2025

*Full-Stack Data + LLM Application* — GitHub

- Built a full-stack **Flask** web application leveraging the **Planet Terp API** to analyze 24k+ courses and 13k+ professors at UMD.
- Created a clean, responsive front-end using **Tailwind CSS**, enabling users to generate professor summaries and insights.
- Engineered a modular LLM pipeline using **Pydantic**, **PromptTemplate**, and **OutputParsers** to deliver structured outputs from **LangChain** and **Groq**.
- Implemented **Redis** caching to reduce API latency and improve application responsiveness.

**Spotify Activity Tracker**

June 2025

*Full-Stack OAuth + Web App Project* — GitHub

- Developed a Flask-based web app that authenticates users with **Spotify OAuth 2.0** and displays real-time playback activity.
- Built backend logic in **Python** for handling access tokens and API communication.
- Designed a minimal, responsive UI with **HTML/CSS** focused on usability.

**MangaUpdates Scraper**

Jan 2025

*Data Science / Recommender System* — GitHub

- Designed an end-to-end pipeline using **BeautifulSoup**, **Requests**, and **Pandas** to scrape and clean metadata from 500+ manga.
- Built a personalized recommender system with **Scikit-Surprise** and **K-Nearest Neighbors**.
- Implemented category scoring and filtering logic for customized user recommendations.

**Obesity Rate Prediction**

May 2025

*Collaborative Data Science Project* — GitHub

- Analyzed obesity rate trends across U.S. populations using CDC data and several regression models, including **Random Forest**, **Linear Regression**, and **KNN**.
- Conducted **hypothesis testing** to assess feature significance; found income and education level most impactful.
- Sanitized and preprocessed the dataset via feature reduction and **KNN imputation**.