

# NICK DIAZ

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[Github](#) | [Linkedin](#) | [Website](#)

## EDUCATION

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### University of Maryland, College Park

Expected May 2025

Bachelor in Computer Science

**Cumulative GPA:** 3.862

**Major Coursework:** Object Oriented Programming, Organization of Programming Languages, Algorithms, Data Science, Advanced Data Structures, Introduction to Artificial Intelligence, Computer Networks, Parallel Computing Statistics, Linear Algebra

## TECHNICAL SKILLS

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**Languages & Tools:** Python, Javascript, Java, C, R, SQL, HTML5, CSS3, Matlab (familiar); C++, Ruby, Assembly (beginner)

**Web Development:** Django, Node.js, React.js, Express.js, MySQL, Twilio

**Data Science & Machine Learning:** Pandas, NumPy, Tensorflow, Keras

**Parallel Computing:** OpenMP, MPI, CUDA

**DevOps:** Git, Confluence, Docker, Heroku, AWS (learning)

## WORK & INTERNSHIP EXPERIENCE

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### Immersive Research Internship Experience (IRIE) at UMD, College Park

May – Oct 2024

- Helped administer survey to collect data on undergraduates' perceptions on AI
- Worked on R and Python programs with co-researchers to identify correlations among survey data using ggplot2 and Pandas.
- First author on a small research paper accepted into the ACM Student Research Competition at SIGCSE TS 2025.

### Software Intern at Hughes Network Systems

May 2023 – May 2024

- Created Python programs to run on Cradlepoint routers and report important signal metrics to a server via MQTT.
- Worked on an SMS bot to automate installing tech for customers using the Twilio with Javascript functions for API requests.
- Improved my ability to document my work, familiarized myself with the development, staging, and production environments.

### Backend Programming at the Twinbrook Pool

Jun – Aug 2022

- Updated the pool's decade old Django system to the latest long term support version at the time.
- Added actions to automate quicken the process of adding guest admission entries along with the member paying for them.

## PROJECTS

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### Game of life Simulation

Oct 2024

- C++ implementation of Conway's Game of Life as a project for CMSC416: Intro to Parallel Computing.
- Divided rows of the input simulation grid into processes which communicated via MPI to update the grid's state.
- Later version of this assignment involved offloading the computations for new cell values to GPUs using CUDA kernels.

### Class Survey Data Analysis

Oct 2023

- Project for CMSC320: Intro to Data Science where we created hypotheses about class survey data then tried to answer them.
- Cleaned the class dataset first with Pandas, performed statistical tests with Python's statistics module, then graphed relationships between survey answers with Matplotlib.

### Weather Prediction Neural Network

Dec 2022

- Final project presented at UMD's BigThink AI club, predicts a day's rain based on historical weather data.
- Created with Python machine learning libraries Sklearn and Tensorflow's Keras API, along with Pandas and NumPy

### Custom Quiz Creator Website

Apr 2022

- Basic web app which allows users to create and post custom quizzes which others can complete and check their score.
- Backend with login authentication supported by Django REST Framework.