

Benjamin O'Neil

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EDUCATION

Villanova University, Villanova, PA

Graduation: May 2025

Bachelor of Science in Computer Engineering | GPA: 3.94

Minors: Business, Computer Science

Courses: C++ Algorithms and Data Structures, Biomedical Instrumentation, Principles of Database Systems, Public Speaking

ENGINEERING & TECH EXPERIENCE

iCustomer

Cambridge, MA

Artificial Intelligence Intern

Summer 2023

- Performed error analysis on two hundred AI model queries, validating outputs and compiling results in Excel for performance assessment.
- Streamlined error checking and handling by processing and outputting failed test cases directly inside the program
- Fine-tuned ChatGPT prompts and optimized model functionality, improving precision on entity recognition and searching.

Computer Engineering Senior Project - In-Cabin Radar

Villanova, PA

Team Leader

Spring 2024 - Spring 2025

- Acquired raw radar data of different vehicle occupancy scenarios, extracting range-doppler, angle-doppler, and range-angle over time and creating visual spectrogram plots for each.
- Developed and trained a series of TimeDistributed convolutional neural network models on twelve thousand generated range-angle plots, accurately predicting the in-cabin scenario in 95% of unseen test cases.

Full Stack & AI Portfolio Development (100-Project Initiative)

Medfield, MA

Self-Directed

Summer 2025 - Current

- Executing a 100-project roadmap to build practical, hands-on expertise in software engineering and data science.
- Built a series of web applications applying front-end application principles using React, HTML, CSS, and JavaScript.
- Applied data analysis and visualization techniques using Python libraries such as Pandas and Matplotlib.
- Utilized foundational machine learning tools like Scikit-learn and TensorFlow for classification and regression problems.

SKILLS

Programming Languages: Python, SQL, Java, C, C++, JavaScript, HTML, CSS, React, Swift (iOS)

Technologies & Expertise: Agile Framework, Cloud Infrastructure (AWS Certified Cloud Practitioner), Web Scraping, Machine Learning, Neural Networks, Deep Learning, Natural Language Processing, Generative AI, PostgreSQL

LEADERSHIP & ACTIVITIES

Villanova Outdoors Club

Villanova, PA

President (2024), Executive Board (2022-2023)

Fall 2022 - Spring 2025

- Led a 35-person executive board and a club of 1,600 members.
- Doubled average weekly trip sign-ups through increased outreach and streamlining the sign-up process.
- Established partnerships with major campus organizations, including Campus Ministry and the Campus Activities Team, to enhance offerings and club visibility.

Everwood Day Camp

Sharon, MA

Group Leader (2021), Camp Counselor (2019-2020)

Summers 2019-2021

- Worked cooperatively with other counselors to supervise a group of 20 children (ages 5-6) through outdoor activities.