

# Minh Phuc Nguyen

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## EDUCATION

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### Villanova University, B.S. in Computer Science and Statistics

Aug 2022 – May 2026

- **GPA:** 4.00 | Veritas Scholar and Honors Student.
- Presidential Scholar Alternate (top 30 out of 2000+ applicants, top 3 CS student) | Honors Student Advisory Board.
- **Coursework:** Analysis of Algorithm, Platform Based Computing, Linear Algebra for Computing, Discrete Structure, Data Structure I & II, Statistic Methods.

## TECHNICAL EXPERIENCE

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### Research Assistant, Villanova Center for Research and Fellowship

May 2023 – Present

- Created machine-readable datasets that serve as valuable resources for developers to build NLP tools for Igbo and Nigerian Pidgin (two under-resourced African languages).
- Built a web scraper using “**BeautifulSoup**” (Python library) and **concurrent programming**; collected 2,000,000+ text data from credible sources (BBC, TedTalk).
- Preprocessed, cleaned, and analyzed the dataset, yielding 116,884 Igbo sentences and 121,266 Nigerian Pidgin sentences.
- Utilized **ChatGPT API**, using **text-davinci-03** engine to annotate ~ 70,000 sentences.

### Undergraduate Research Assistant, Villanova Center for Research and Fellowship

Jan 2023 – April 2023

- Improved the text-generation of AMR-system to make it more human-like.
- Conducted literature review about Natural Language Processing, AMR-to-text generation, and “translationese”.
- Utilized **Python** and **Jupyter Notebook** to identify the differences between 58000+ computer-generated and human-generated sentences and helped automate the testing of these differences over large datasets.
- Suggested learning sarcasm and mathematical expressions to enhance the AMR-system; co-authored a 12-page research report.

### Researcher, Designer, Competitor, AI Convergence Creative Olympic

May 2021 – Aug 2021

- Invented, installed, and ran a Wifi-controlled remote Trash Collector Device with 4 other team members using the Blynk mobile app and wifi receiver unit.
- Awarded Gold in the 2021 AI-JAM Online Competition (Silicon Valley, USA) with more than 150 innovations and approximately 500 students participated in worldwide.
- Made a device that costs ~ \$15, can carry 2.2 kilograms of plastic floating trash on rivers and lakes, and lasts ~ 3 hours.

## PROJECTS

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### Film Recommendation System | [Link](#)

April 2023 – May 2023

- Created a film recommendation algorithm by applying knowledge learnt from the Linear Algebra class.
- Leveraged **scikit-learn** (machine learning library), **Pandas**, **NumPy** (Python libraries), and **K-mean clustering** method.
- Utilized the MovieLens dataset, which contains 100,000 ratings (1-5) from 943 users and 1682 movies.
- Managed to generate a list of 10 movie recommendations for each user in the dataset.

### Villanova University Calorie Tracker | [Link](#)

March 2023 – April 2023

- Built a school’s calorie tracker web app by applying knowledge from the Platform-Based Computing class.
- Developed web app functions such as adding foods to the cart, calculating total macros and calories, and saving and retrieving users’ names using **React**, **HTML**, and **CSS**.
- Implemented **Firebase** to host the web app and used **Cloud Firestore** to store food and user data.

### Personal Web Portfolio | [Link](#)

Jan 2023 – Present

- Built my web portfolio using **Javascript**, **HTML**, and **CSS**.

## SKILLS

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- **Programming languages:** Python, Java, React, JavaScript, CSS, HTML.
- **Developer Tools:** VS Code, GitHub, RStudio, Eclipse, Jupyter Notebook.
- **Languages:** Vietnamese (native), English (professional working).

## LEADERSHIP & ACTIVITIES

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### Committee, Local Program Host, Special Olympics

Sep 2022 – Present

- Administering ~300 volunteers during the upcoming 2023 Special Olympics Fall Festival.
- Accompanied, supported, and motivated 20 athletes from Marion County throughout their competition days.

### President, Head of Organizer, Astronomy Club in Hanoi-Amsterdam High School

Dec 2019 – June 2022

- Built and managed an astronomy website; authored 200+ articles on various astronomy topics.
- Hosted an online fundamental astronomy course through Zoom, which attracted 150 students aged 8 to 13 from nationwide - the course consists of 6 lessons and lasts for 3 weeks; led a team of 80 members.