

Minh Phuc Nguyen

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EDUCATION

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

Aug 2022 – May 2026

- GPA: 3.96 | Veritas Scholar and Honors Program Student.
- Presidential Scholar Alternate (top 30 out of 2000+ applicants, top 3 CS student) | Honors Student Advisory Board.
- **Coursework:** Computer System I, Data Science, Organization of Programming Languages, Analysis of Algorithm, Platform Based Computing, Linear Algebra for Computing, Discrete Structure, Data Structure I & II, Statistic Methods.

TECHNICAL EXPERIENCE

Research Assistant, Villanova Center for Research and Fellowship

May 2023 – Present

- Fine-tuned preexisting translation models using the self-researched and curated datasets in Igbo and Nigerian Pidgin; currently working to improve translation models' translation accuracy from these Nigerian languages to English.
- Developed machine-readable datasets as valuable resources for developers working on Natural Language Processing tools for Igbo and Nigerian Pidgin, addressing the challenges faced by these under-resourced African languages.
- Implemented a web scraper using the "BeautifulSoup" Python library and concurrent programming techniques, extracting over 2,000,000 text data from reputable sources such as BBC and TedTalk.
- Preprocessed and analyzed the dataset, resulting in 116,884 Igbo sentences and 121,266 Nigerian Pidgin sentences; applied the ChatGPT API to annotate approximately 70,000 sentences.

Undergraduate Research Assistant, Villanova Center for Research and Fellowship

Jan 2023 – April 2023

- Enhanced the text-generation capabilities of AMR-system, making its output to be more human-like.
- Employed Python and Jupiter 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

Exploring Relationship: World Education and Unemployment | [Link](#)

March 2023 – May 2023

- Utilized R to analyze data from the CIA World Fact Book, employing data wrangling techniques
- Uncovered a significant negative correlation between global unemployment and education rates through data visualization.

Film Recommendation System | [Link](#)

April 2023 – May 2023

- Developed a film recommendation algorithm using Python and k-mean clustering method; this algorithm efficiently generates a curated list of 10 movie recommendations for each user.
- Utilized the MovieLens dataset, which contains 100,000 ratings (1-5) from 943 users and 1682 movies.

Villanova University Calorie Tracker | [Link](#)

March 2023 – April 2023

- Built a school's calorie tracker web app using React, HTML, and CSS.
- Developed web app functions such as adding foods to the cart, calculating total macros and calories, and saving and retrieving users' names; implemented Firebase to host the web app and used Cloud Firestore to store food and user data.

SKILLS

- **Programming languages:** Python (Proficient); R, Java, React, JavaScript, CSS, HTML (Intermediate); C (Beginner)
- **Developer Tools:** VS Code, GitHub, RStudio, Eclipse, Jupyter Notebook.
- **Languages:** Vietnamese (native), English (full professional).

LEADERSHIP & ACTIVITIES

President, Villanova University Badminton Club

Jan 2024 – Present

Committee Member, Local Program Host, Special Olympics

Sep 2022 – Present

- Administered ~2000 volunteers in the Special Olympics Fall Festival by delegating them to 8 competition venues and registering them to the Special Olympics's database system.

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.