# Minh Phuc Nguyen

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## EDUCATION

**Villanova University, *B.S. in Computer Science*** *Aug 2022 – May 2026*

- **GPA:** 4.00 | **Secondary Major:** Statistics | Veritas Scholar and Honors Student (top 9% out of ~1500 students).
- Presidential Scholar Alternate (top 30 out of 2000+ applicants, top 3 CS student) | Honors Student Advisory Board.
- **Coursework:** Analysis of Algorithms, Platform-Based Computing, Linear Algebra for Computing, Discrete Structures, Data Structures I & II, Statistical Methods.

## SKILLS

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

## TECHNICAL EXPERIENCE

**Research Assistant, *Villanova Summer Research*** *May 2023 – Present*

- Created a machine-readable dataset for two low-resource African languages: Igbo and Nigerian Pidgin.
- Built a web scraper using "**BeautifulSoup**" (Python library) and **concurrent programming** that collects 2,000,000+ text data from credible sources (BBC, TedTalk).
- Preprocessed, cleaned, and analyzed the dataset, resulting in 116,884 Igbo and 121,266 Nigerian Pidgin sentences.
- Implemented **ChatGPT API** with the **text-davinci-03** engine to translate ~ 70,000 sentences to English.
- The dataset can be a valuable resource for developers to build NLP tools for Igbo and Nigerian Pidgin languages.

**Undergraduate Research Assistant, *MATCH Research Program*** *Jan 2023 – April 2023*

- Conducted literature review on Natural Language Processing, AMR-to-text generation, and translationese.
- Utilized **Python** and **Jupyter Notebook** to identify differences between 58,000+ computer-generated and human-generated sentences and helped automate the testing of these differences over large datasets.
- Suggested learning of sarcasm and mathematical expressions to make the AMR system's text-generation more human-like.
- Collaborated with two other researchers to co-author a 12-page research report, leveraging **Overleaf** for document editing.

**Researcher, Designer, Competitor, *AI Convergence Creative Olympic*** *May 2021 – Aug 2021*

- Awarded Gold in the 2021 AI-JAM Online Competition, Silicon Valley, USA with 150+ innovations and ~500 participating student worldwide.
- Invented, installed, and operated a Wi-Fi-controlled remote Trash Collector Device with 4 team members using the Blynk mobile app and Wi-Fi receiver unit.
- The device costs ~ $15 to make, can carry 2.2 kilograms of plastic floating trash on rivers and lakes, and lasts ~ 3 hours.

## PROJECTS

**Linear Algebra for Computing Final Project: Film Recommendation System | *Link*** *April 2023 – May 2023*

- Leveraged **sklearn** (machine learning libary), **Pandas, Numpy** (Python libaries), and **K-mean clustering** method to generate 10-movies recommendations for each user in the dataset.
- Ultilized MovieLens dataset containing 100,000 ratings (1-5) from 943 users and 1682 movies.

**Platform Based Computing Final Project: Villanova University Calories Tracker | *Link*** *March 2023 – April 2023*

- Implemented **React**, **HTML**, and **CSS** to create a calories tracker web app allowing students to add foods, view total macros and calories, and save/retrieve information through their username.
- Hosted the web app on **Firebase** and stored users' and foods' data using **Cloud Firestore.**

**Personal Web Portfolio** | *Link* *Jan 2023 – Present*

- Developed a personal web portfolio using **Javascript**, **HTML**, and **CSS**.

## LEADERSHIP & ACTIVITIES

**Committee, Local Program Host, *Special Olympics*** *Sep 2022 – Present*

- Accompanied, supported, and motivated 13 athletes from Marion County throughout their competition days.
- Administering ~50 volunteers peers during the upcoming 2023 Special Olympics Fall Festival.

**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.
- Organized two online astronomy classes about chartering a STEM's club through Zoom, holding 150+ teachers from nationwide.