Matthew Varona

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Education

New York University Abu Dhabi   *Abu Dhabi, UAE/New York, USA*
Bachelor of Sciences, Computer Science + Bachelor of Arts, Interactive Media (GPA: 3.812/4)   *2019-2024*

- Coursework taken in New York, Prague, Berlin, and Abu Dhabi.

Research Experience

NYU Tandon School of Engineering   *Remote*
Research Intern   *May 2021 - Present*

- Project: **Visualization of machine learning classifier boundary points**, with Prof. Enrico Bertini

NYU Abu Dhabi Social Science   *Abu Dhabi, UAE*
Research Intern   *September 2021 - February 2023*

- Project: **Identifying listening contexts and musical features from user-generated YouTube playlists**, with Prof. Minsu Park

Hasso Plattner Institute   *Berlin, Germany*
Research Intern   *May 2022 - August 2022*

- Project: **Adaptive vector drawing toolsets for laser cutting**, with Prof. Patrick Baudisch

NYUAD Center for Space Science   *Abu Dhabi, UAE*
Research Assistant   *October 2020 - June 2021*

- Conducted linear regression and exploratory analysis on solar radiation data from Mars in support of the UAE's first-ever interplanetary space mission.

Industry Experience

Sakay.ph   *Remote*
Software Engineering Intern   *September 2020 - October 2020*

- Developed bilingual customer service chatbot, collaborating with UX and engineering teams.

Sakay.ph   *Taguig, Philippines*
Data Science Intern   *May 2020 - August 2020*

- Worked on transit stop data infrastructure and a visualization toolkit for analyzing transit demand vs. coverage.

Teaching Experience

Fall 2020   Teaching assistant for **IM-UH 2310, Decoding Nature** - delivered lectures, assembled readings, and created p5.js code demos

2019-2020   Debate coach at the **NYUAD High School Debate Workshop** - developed lesson plans, interactive workshops, and demo debates to teach public speaking and rhetoric to 50+ high school students

Publications and Presentations

Interpretable Visualizations of Machine Learning Boundary Points   *Poster Presentation*
NYU Tandon Undergraduate Research Symposium   *August 2021*

Visualization of Multidimensional Classifier Decision Boundaries *Abstract*

Awards and Fellowships

Undergraduate Summer Research Grant

NYU Abu Dhabi *May 2021*

Full-Ride Scholarship

NYU Abu Dhabi *August 2019 - May 2024*

Philippine National Debate Champion

National Schools Debate Championship *May 2019*

Best Debater in Asia

Asian Schools Debate Championship *October 2018*

Selected Projects

Audibird: bird sounds from around the world

Technologies: p5.js, jQuery | LINK *May 2022*

- Created an interactive visualization that showcases crowdsourced bird sounds submitted by birdwatchers around the globe.
- Developed a web app that aggregates data from the eBird, WikiData, and xeno-canto APIs and displays it on MapboxGL.

postcARds

Technologies: Unity3D, C# *August 2021*

- Developed an augmented reality museum app in collaboration with Berlin's Museum for Communication.
- Designed and implemented functionality allowing users to wield their phones as 3D paintbrushes on the museum's historical postcard collection.

Eurhythmce

Technologies: Unity2D, C# | LINK *July 2021*

- Worked as lead developer and level designer for a rhythm puzzle game based on Greek mythology.

Leadership and Extracurriculars

PAUSED: NYUAD Video Game Society

President *2023*

- Hosted regular esports tournaments and managed a communal games account where students could vote on new games to buy.

NYUAD Debate Society

Vice-President *January 2020 - May 2020*

- Taught high school debate workshop, organized dozens of flights to and from tournaments, managed debate union budget.

CAUSE Philippines

Scholars for Scholars speaker and admissions advisor *July 2020*