

Michael Duffy

Crownsville, MD

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Education

Bachelor of Arts in Computer Information Systems

Notre Dame of Maryland University, Baltimore, MD | *Graduating May 2025*

- College Basketball Team (2023–2025), All-Sportsmanship Team

Associate of Arts and Sciences in Psychology

Anne Arundel Community College, Arnold, MD | *Graduated May 2023*

- Treasurer, Student Athlete Advisory Committee (2021–2023)
 - College Basketball Team Captain (2022–2023)
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Projects

VictoryVerse – Full Stack Web Application

Node.js, MySQL, Express.js, HTML/CSS, JavaScript, Puppeteer, Axios

- Built a gaming platform with secure user authentication, profile customization, and account management using RESTful APIs.
- Scraped and integrated live leaderboard and gaming news data using Puppeteer and Axios.
- Designed responsive, dynamic pages including user profiles and game details.
- Collaborated with a partner on database design and system architecture to support real-time functionality.

Apple Music Churn Prediction – Intelligent Agent-Based Analytics System

Python, Pandas, scikit-learn

- Designed and implemented a machine learning model to analyze Apple Music user data and predict churn risk.
- Applied full data science workflow: data cleaning, exploratory analysis, feature engineering, model training, and evaluation.
- Developed scripts to automate preprocessing tasks and streamline data pipeline execution.
- Debugged and tested model outputs to ensure reliability and accuracy.
- Gained practical experience with algorithms, performance metrics, and iterative testing aligned with real-world engineering practices.

NBA Stats Database Application

MySQL, Excel, SQL Queries

- Developed a full database system lifecycle (analysis, design, implementation) using official NBA statistics.
- Cleaned and transformed CSV data using Excel formulas and scripting for MySQL import.
- Built and tested SQL queries to generate insights and compile custom datasets.

Python Hangman Game (Final Project)

Python with GUI

- Created a fully functional Hangman game with a graphical interface.
 - Implemented input validation, error handling, and dynamic word display logic.
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Work Experience

IT Student Assistant

Notre Dame of Maryland University IT Department | *Sept 2024 – May 2025*

- Installed and configured hardware/software across campus systems.
- Assisted with deployment and configuration of PCs using Deep Freeze and other tools.
- Supported system upgrades, testing, and documentation of IT processes.

Event Technology Assistant (Check-In / Front Desk)

MadeHoops, Baltimore, MD | *Feb & Apr 2024*

- Used Excel and digital check-in systems to manage data and player registration.
- Troubleshoot user login and payment issues, ensuring smooth event operations.
- Applied problem-solving skills to onboard spectators into a new digital system.