

# ANGEL M. VELASQUEZ

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Portfolio: <https://www.amvelasquez.dev/>

## EXPERIENCE

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|--|--|---------------------------|
| <b>Code School Instructor</b>  | <b>Utah Tech University St. George, UT</b> | <b>May 2024 – Present</b> |
| <ul style="list-style-type: none"><li>Teach Utah Tech University students web development frameworks such as Vue.js, Node.js, Express.js, and MongoDB.</li><li>Design an engaging curriculum of projects and exercises to reinforce the technologies taught throughout the course.</li></ul>   |  |                           |
| <b>VR Software Developer</b>   | <b>Utah Tech University St. George, UT</b> | <b>May 2023 – Present</b> |
| <ul style="list-style-type: none"><li>Utilize the Normcore networking solution to connect students together within the lab experience.</li><li>Implement real-time data tracking systems to accurately graph and visualize student data.</li><li>Optimized a render texture save system to ensure the preservation of whiteboard images.</li></ul> |  |                           |

## EDUCATION

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| <b>Bethlehem, PA</b>   | <b>Lehigh University</b>    | <b>(Aug 2024) – (May 2026)</b> |
| <ul style="list-style-type: none"><li>M.Eng. in Computer Science</li></ul>   |                             |                                |
| <b>St. George, UT</b>  | <b>Utah Tech University</b> | <b>Jan 2022 – May 2024</b>     |
| <ul style="list-style-type: none"><li>B.S. in Software Engineering, May 2024, Magna Cum Laude, Major GPA: 3.95</li></ul> |                             |                                |

## PROJECTS

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| <b><u>Lyric Luminary</u></b>   | <b>Python, JupyterLab, Go, Svelte, Bash, Nim</b>               |
| Music Genre Classification Desktop Application with Natural Language Processing:   |  |
| <ul style="list-style-type: none"><li>Developed a desktop application that leverages natural language processing techniques to classify song lyrics into music genres.</li><li>Implemented a TF-IDF support vector machine model for genre classification based on song lyrics.</li><li>Integrated the Spotify API to provide music recommendations based on the classified genres of user-inputted lyrics.</li></ul>  |  |
| <b><u>Ultimate Fight Predictor</u></b>   | <b>scikit-learn, pandas, MongoDB, JavaScript, Vue, Express</b> |
| UFC Bout Outcome Prediction Web Application:   |  |
| <ul style="list-style-type: none"><li>Engineered a data preprocessing pipeline with feature extraction techniques to optimize data dimensionality and enhance model performance.</li><li>Developed a classification model with machine learning algorithms to predict the outcomes of UFC fights based on primary features.</li><li>Designed and implemented a web application that utilizes the trained prediction model to predict the outcome of upcoming and past UFC bouts.</li></ul> |  |
| <b><u>Godot Image Classification</u></b>   | <b>Godot, Python, GDScript, PyTorch</b>                        |
| Convolutional Neural Network Integration in Godot Game Engine:   |  |
| <ul style="list-style-type: none"><li>Implemented a convolutional neural network using PyTorch for real-time classification of dogs and cats within a Godot game.</li><li>Integrated the trained neural network model as a core gameplay mechanic, enabling dynamic classification during runtime.</li></ul>   |  |

## PUBLICATIONS/PRESENTATIONS

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### “Multivariate Analysis of Southern Utah Water Quality”

2024 Trailblazer Symposium

- Utilized principal component analysis to determine which features are most descriptive of water quality data
- 2024 Trailblazer Symposium Oral Presentation Winner

## SKILLS/TECHNOLOGIES

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- Python, Java, C++, HTML/CSS, SQLite, Javascript, Kotlin, Tableau
- Linux, Git, Vue, C#(Unity), LaTeX, Android Studio, Excel, MongoDB