

# Reggie Segovia

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## Education Background

### University of Florida

Gainesville, FL

- *Bachelor of Science*, Computer Science, **Summa Cum Laude** | GPA: 3.81/4.0 01/2024 – 12/2025
- **Relevant Courses:** *Data Structures & Algorithms, AI, Database Systems, Computational Linear Algebra, OS, VR*
- **Honors:** *Bright Futures Florida Academic Scholars Award (100% tuition), Dean's List Spring 2025*
- **Clubs:** *Tau Sigma National Honor Society: Executive Board - Webmaster, SHPE, FinTech Club, ACM, UFSIT*

## Professional Experience

### Research Assistant, HCI Lab | University of Florida

04/2025 – Present

- Led the development of "**Graspable Memories**," an **AI-powered projected reality system** enabling on-hand interaction with images using natural occlusion as the core interaction mechanism.
- Engineered **AI hand tracking algorithms** for real-time gesture recognition and spatial interaction, forming the basis for a research paper submitted to the **IEEE AIxVR 2026** conference.
- Architected a **VR conversational AI in Unreal Engine**, integrating a full-stack speech pipeline with **Whisper (STT), Gemini (LLM), ElevenLabs (TTS), and NeuroSync** for realistic lip-syncing.

### Teaching Assistant, Introduction to Virtual Reality | University of Florida

08/2025 – Present

- Mentor and support **150+ cross-listed students** in a hands-on Unity XR development course.
- Lead lab sessions covering **VR hardware setup, tracking, spatial interaction design, and C# programming**.
- Provide detailed feedback on 3D programming concepts and assist students in debugging complex VR applications, improving overall project quality and comprehension.

### Web Development Intern | Aquarelle Realty, Orlando, FL

02/2023 – 01/2025

- Developed **full-stack web functionalities** using **PHP, JavaScript, CSS, and MySQL** for a high-traffic platform.
- Integrated **third-party APIs** for self-updating property listings, mortgage calculations, and geolocation services.
- Optimized website performance and search rankings through **targeted SEO implementation**.

## Projects

### VR Conversational AI Agent | *Unreal Engine, Python, Gemini, Whisper API, ElevenLabs API, LangGraph/LangChain*

- Developed an immersive **VR system** featuring a **conversational AI agent** capable of natural, real-time interaction.
- Architected a **full-stack speech and intelligence pipeline**, integrating **Whisper** for speech-to-text, **Gemini LLM** for dynamic response generation, and **ElevenLabs** for realistic text-to-speech synthesis.
- Spearheaded integration of an **Agentic AI framework**, authoring proposals and leading implementation of **autonomous reasoning** and **multi-step task execution** capabilities.

### Full-Stack Data Science Application: Stock Price Prediction | *Python, NLP, Scikit-learn, Streamlit, Twitter API*

- Built a comprehensive **machine learning pipeline** to predict stock price movements by combining historical market data with real-time Twitter sentiment analysis for the **top 25 most-watched stocks**.
- Implemented **NLP techniques**, including **VADER sentiment analysis** and a **custom Naive Bayes classifier** to extract actionable insights from social media data.
- Designed and deployed an interactive **Streamlit** web application with **real-time data visualizations, confusion matrices, Monte Carlo simulations, and ROC-AUC performance metrics** to support investor decision-making.

### iOS Journaling App: Echo Journal | *Swift, SwiftUI, CoreML, Natural Language Framework*

- Engineered an **AI-powered iOS journaling application** from concept to completion using **SwiftUI** and **CoreML**.
- Trained and deployed a custom "**toneDetectorAI**" **CoreML model** for on-device, real-time emotion analysis.
- Architected a modular and responsive **UI** featuring a calendar-based mood board, photo integration, and comprehensive entry management with **Core Data** for persistent local storage.

## Skills

- **Programming Languages:** Python, C++, C#, Swift, JavaScript, Java, SQL, PHP
- **AI & Machine Learning:** TensorFlow, PyTorch, CoreML, Scikit-learn, Computer Vision (MediaPipe), NLP
- **Immersive Technologies:** Unity XR, Unreal Engine, VR/AR Development, Spatial Computing, Hand Tracking
- **Frameworks & Tools:** React, .NET, Node.js, SwiftUI, AWS, Git, Docker, MySQL, Oracle Database, Linux
- **High-Performance Computing:** CUDA, OpenCL, Parallel Computing, GPU Optimization

## Publications

de Siqueira, A. G., Segovia, R. D., Palmeira, E. G. Q., Grill, B. (2026) "Graspable Memories: A Sustainable Approach to Holding Personal Memories Through Occlusion-Aware Projected Interaction." Submitted to *IEEE AIxVR 2026*.