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: Webmaster, Hispanic-Latino Cultural Club, 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*

- 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 **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**, **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*.