

Andres Gonzales

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OBJECTIVE

Building/Innovating AI products for education from both sides, as a former educator who understands the problems, and an engineer who can ship solutions. Currently developing district-wide AI platforms and conducting research in multi-agent systems. Passionate about bridging education and technology to improve outcomes for all stakeholders within education.

EDUCATION

University of Texas Rio Grande Valley <i>Master of Science in Computer Science (Thesis Track) – GPA: 4.0</i>	Edinburg, TX <i>Summer 2025 – May 2026</i>
University of Texas Rio Grande Valley <i>Bachelor of Science in Biology</i>	Edinburg, TX <i>Aug. 2019 – May 2023</i>

EXPERIENCE

AI Systems Engineer/AI Product Manager <i>Harlingen Consolidated Independent School District</i>	July 2025 – Present <i>Harlingen, TX</i>
<ul style="list-style-type: none">Architected district-wide AI application using React, TypeScript, and Vertex AI RAG Engine, serving 150+ administrators, reducing document lookup time by 80% and saving 5+ hrs/week per userDeveloping AI chatbot for public website and Chrome extension agent using Gemini 2.5 Pro, projected to reduce call center volume by 40% and improve community access to district resourcesBuilt Employee Engagement Dashboard with Next.js and Azure AD across 45+ campuses, eliminating 10+ hrs/week of manual reporting and enabling faster data-driven decisionsDelivered AI presentations at Admin Kickoff, HLC Leadership Summit, and HAEF nonprofit, training 150+ leaders—driving 30% increase in AI tool adoption across departments	
Graduate Research Assistant <i>MARS Lab (Multi-Autonomous Robotics Swarm), UTRGV</i>	Summer 2025 – Present <i>Edinburg, TX</i>
<ul style="list-style-type: none">Conducting multi-robot foraging research using PPO reinforcement learning algorithms in Webots simulationCollaborating on Human-AI Trust study (IRB 250672) investigating trust dynamics in AI-mediated communication	
High School Chemistry Teacher & Science Department Lead <i>Harlingen School of Health Professions, HCISD</i>	July 2024 – July 2025 <i>Harlingen, TX</i>
<ul style="list-style-type: none">Developed automated course scheduling platform using Power Automate, JavaScript, and SharePoint APIs, reducing scheduling effort by 90% for 400+ students at HSHP with district-wide scalabilityEngineered QR-based student tracking system with PowerApps, cutting front office workload by 50% and improving accountability across 400+ studentsCreated self-monitoring academic tracker resulting in 25% grade improvement in pilot classroomParticipated in district AI Innovation POD, leading to development of HCISD AI Application; presented AI tools training at district PD session	

PROJECTS & RESEARCH

HCISD AI Platform <i>React, TypeScript, Firebase, Vertex AI, GCP RAG Engine</i>	2025
<ul style="list-style-type: none">Full-stack RAG application connecting LLMs to district document storage, reducing admin research time by 70%Implemented secure document retrieval with role-based access for 150+ administrators across district	
Employee Engagement Dashboard <i>Next.js, TypeScript, Azure AD, SharePoint API, Recharts</i>	2025
<ul style="list-style-type: none">Real-time analytics dashboard tracking survey responses across 45+ campuses, saving 10+ hrs/week of manual reportingIntegrated Azure AD authentication and SharePoint REST API for secure, live data synchronization	
Human-AI Trust Research <i>React, Vercel, Survey Design</i>	2025
<ul style="list-style-type: none">Developed survey platform examining trust perception across AI-only, AI-assisted, and human-only communications	
Multi-Agent RL Foraging Simulation <i>Python, Webots, Stable Baselines 3, MAPPO</i>	2025
<ul style="list-style-type: none">Built swarm robotics simulation achieving 95% collection rate using decentralized multi-agent reinforcement learning	

LEADERSHIP & RECOGNITION

Google for Education Leadership Series , Chicago – October 2025
Presentations: HCISD Admin Kickoff AI Session, HLC Leadership Summit, HAEF Nonprofit AI Presentation – 2025
District Roles: Innovative Agent for Change, SHAC Secretary, AI Innovation POD – 2024–2025
School Roles: Apple Learning Coach, NHS Co-Sponsor, Class of 2029 Sponsor, PTSA Member – 2024–2025

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, SQL, Java, HTML/CSS
Frontend: React, Next.js, Vue.js, Vite, TailwindCSS
Cloud & Backend: GCP (Vertex AI, RAG Engine, Vector Search), Firebase, Azure, Vercel, Node.js
AI/ML: OpenAI API, Stable Baselines 3, PyTorch, PPO, DQN, MAPPO, RAG
Business Automation: Power BI, Power Automate, PowerApps, SharePoint