

Joshua Gao
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EDUCATION

PhD in Computer Engineering <i>University of Houston</i>	GPA 3.8 Expected May 2029
BS in Cognitive Science: Artificial Intelligence Focus; Entrepreneurship Minor <i>The University of Texas at Dallas: Cum Laude, Academic Excellence Scholarship</i>	GPA 3.7 May 2021

PROFESSIONAL EXPERIENCE

Research Assistant - Structures and Artificial Intelligence Lab	May 2024 – Present
<ul style="list-style-type: none">Co-authored ICCV SEA Workshop 2025 paper introducing <i>ViewDelta</i>, the first transformer-based architecture for text-prompted change detection in unaligned images; developed the CSeg dataset with 500K+ synthetic image pairs and demonstrated state-of-the-art performance across diverse domains.Co-authored a novel agentic framework for evaluating Retrieval-Augmented Generation (RAG) systems in high-stakes domains, introducing synthetic QA dataset generation and quality metrics powered by LLM as a segmentation judgeLed development of an AI-powered pipeline for automated engineering report generation, integrating LLMs and computer vision to extract insights, format reports, and identify key changes—reducing manual reporting time for engineers	
AI Specialist - Sharp Vision Software	May 2021 – Aug 2024
<ul style="list-style-type: none">Developed an AR human body part tracking application within Unity for medical mobile applications designed to assist military medical personnel in the fieldCreated multiple NLP conversational chatbots acting as medical patients to better enable DOD military instructors to teach medical best practicesSimulated bodily processes including heart rate, respiratory rate, pulse oximetry, and other important vitals by using CAE's manikins to create more realistic scenarios such as tension pneumothorax and stroke for military medical students	
TREO IT Intern - Zions Bancorporation	Jun 2020 – Aug 2020
<ul style="list-style-type: none">Led a research initiative to identify the ideal network monitoring tool to be used for the company's IT infrastructure in order to consolidate the many existing tools into a single pane of glassWorked with multiple IT teams to organize job scheduling, initialize servers, and patch cybersecurity vulnerabilities	
Business Development Intern - Motor King International	Jun 2018 – Aug 2018
<ul style="list-style-type: none">Conducted in person market research to analyze the socioeconomic demographic of customersOrganized meetings between the Burkina Faso Ambassador and Motor King International executives	

TECHNICAL SKILLS

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- Languages:** Python, JavaScript, C#, Java, C++, HTML, CSS, SQL
 - Tools:** Git, Unity, Google Cloud Platform, Firebase, MongoDB, React, React-Native, Expo