

Joshua Gao
www.joshgao.com

joshuakgao@gmail.com
713-376-2868

EDUCATION

PhD in Computer Engineering <i>University of Houston</i>	GPA 3.8 Expected May 2028
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

RESEARCH EXPERIENCE

What RAG Evaluation Gets Wrong: Addressing Pitfalls of Metrics and QA Generation Joshua Gao, Subin Varghese, Vedhus Hoskere - <i>ACL 2026 (under review)</i>	Jan 2026
RAGalyst: Automated Human-Aligned Agentic Evaluation for Domain-Specific RAG Joshua Gao, Huy Pham, Subin Varghese, Silwal Saurav, et al. - <i>MLJ (under review)</i>	Dec 2025
BridgeEQA: Virtual Embodied Agents for Real Bridge Inspections Subin Varghese, Joshua Gao, Asad Ur Rahman, Vedhus Hoskere - <i>CVPR 2026 (under review)</i>	Dec 2025
ViewDelta: Scaling Scene Change Detection through Text-Conditioning Subin Varghese, Joshua Gao, Vedhus Hoskere - <i>ICCV 2025 SEA Workshop</i>	Oct 2025

INDUSTRY EXPERIENCE

Research Assistant - Structures and Artificial Intelligence Lab <ul style="list-style-type: none">Co-authored multiple papers on transformer-based change detection, agentic RAG evaluation, and embodied inspection agents, introducing novel datasets and frameworks evaluated at scaleLed development of an AI-powered engineering report generation pipeline combining LLMs and vision models for defect extraction, change detection, and structured report synthesis, reducing manual reporting time by ~60%	May 2024 – Present
AI Specialist - Sharp Vision Software <ul style="list-style-type: none">Developed an AR-based human body part tracking system in Unity for medical mobile applications, supporting real-time pose estimation and anatomical interactionBuilt NLP-driven conversational agents simulating medical patients to train U.S. Department of Defense (DoD) military instructors in emergency and field medicineSimulated physiological processes, including heart rate, respiratory rate, pulse oximetry, and neurological responses, using CAE medical manikins to create realistic training scenarios (e.g., tension pneumothorax, stroke)	May 2021 – Aug 2024
TREO IT Intern - Zions Bancorporation <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	Jun 2020 – Aug 2020
Business Development Intern - Motor King International <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	Jun 2018 – Aug 2018