

# HUAJUN CHEN

ArcGIS · Python · React



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## PROFESSIONAL OVERVIEW

Strategic GIS Lead & Enterprise Architect with 15+ years of experience specializing in the ArcGIS ecosystem, React, and Python. Expert in designing resilient system architectures, leading digital transformations, and pioneering AI-driven geospatial solutions to optimize municipal and enterprise operations.

## EXPERIENCE

### ***City of Garland, GIS Lead***

**(2025 - Present)**

- **Strategic Enterprise Architecture & Migration:** Architecting the City's transition from ArcGIS 10.8 to 11.x, redesigning full-stack infrastructure on SQL Server.
  - Designed integrated system architecture and coordinated cross-departmental IT resources to ensure security and performance alignment.
  - Establishing technical delivery standards and transitioning legacy workflows to ArcGIS Experience Builder to modernize spatial capabilities.
- **Innovation & AI Strategy (POC):** Pioneering Gen AI integration into municipal workflows to drive operational efficiency.
  - Architected AI-driven field reporting platform using LLMs and speech-to-text to convert unstructured voice data into spatially-aware incident records.
  - Directing exploration of natural language GIS interfaces to democratize spatial data access via AI-powered conversational querying.
- **Digital Service Modernization:** Overseeing strategic overhaul of public-facing GIS solutions to improve transparency and streamline community engagement.

### ***Cognizant, Senior Developer (Client: FM Global)***

**(2021 - 2025)**

- **AI-Enhanced Map Object Detection (Prototype):** Architected automated system using **SAM-GEO** foundation models to streamline geospatial feature extraction.
- **Environmental Data Visualization Platform:** Led cross-functional team to build high-performance web mapping application for global pollution monitoring.
- **Enterprise Architecture & DevOps Strategy:**
  - Architected CI/CD pipeline for ArcGIS Enterprise to automate deployment of web apps, maps, and schemas, eliminating manual errors.
  - Optimized system performance by tuning execution models, validated through rigorous JMeter load testing.
- **Actuarial Property Valuation System:** Engineered four-stage Python data pipeline (Cleaning, Enrichment, Analysis, Reporting) for property valuation.
  - Architected high-fidelity data enrichment pipeline by orchestrating multiple APIs (internal/external).
  - Secured and scaled solution using Azure services, achieving **90% test coverage**.
- **Enterprise GIS Workflow:** Built end-to-end low-code solutions using ArcGIS Enterprise and Workflow Manager.

## ***City of Garland, GIS Lead***

**(2013 - 2021)**

- **Enterprise GIS Architecture:** Managed enterprise GIS ecosystem; led critical migration from Oracle to SQL Server.
- **Public Transparency Initiative:** Launched Open Data Hub and developed high-impact public GIS applications using ArcGIS API for JS 4.x.
- **Operational Automation:** Streamlined inter-departmental workflows using Python and real-time data integration.

## ***City of Dallas, GIS Analyst***

**(2009 - 2013)**

- **Field Operations Optimization:** Designed inspection task scheduler for field crews, enhancing workflow efficiency and workload management.
- **Workflow Automation:** Engineered Python automation scripts to streamline field data collection, synchronize updates, and automate "Notice of Violation" reports.
- **Mentorship & Data Quality:** Mentored staff on ArcGIS mapping, SQL optimization, and data entry best practices.

## ***Earlier Research & Internships***

**(2008 - 2009)**

- **LiDAR Analysis (UT Dallas):** Developed ArcObjects and VB.NET tools to classify buildings/trees from LiDAR data. Conducted field validation using high-precision GPS.
- **Address Intelligence (North Central Texas Council of Governments):** Created accurate 9-1-1 address data for two counties, adhering to best practices for emergency response.

## **EDUCATION**

### **• Master of Science in GIS**

The University of Texas at Dallas, Richardson, TX  
2007 - 2009

### **• Bachelor of Science in Urban and Rural Planning**

Peking University, Beijing, China  
2002 - 2006

## **SKILLS**

### **Cloud Platforms:**

AWS, Azure.

### **Databases:**

SQL Server, PostgreSQL, MySQL, Oracle, Convex (Vector Database).

### **Tools & Software:**

Power-BI, JMeter, NotebookLM, Cursor, Antigravity, Codex, Experience Builder, Workflow Manager.

## **INDUSTRIES**

Insurance

Local Government

## **CERTIFICATION**

### **• AWS Certified Cloud Practitioner**

2022 - 2025

### **• Microsoft Certified: Power BI Data Analyst Associate**

2024 - 2025