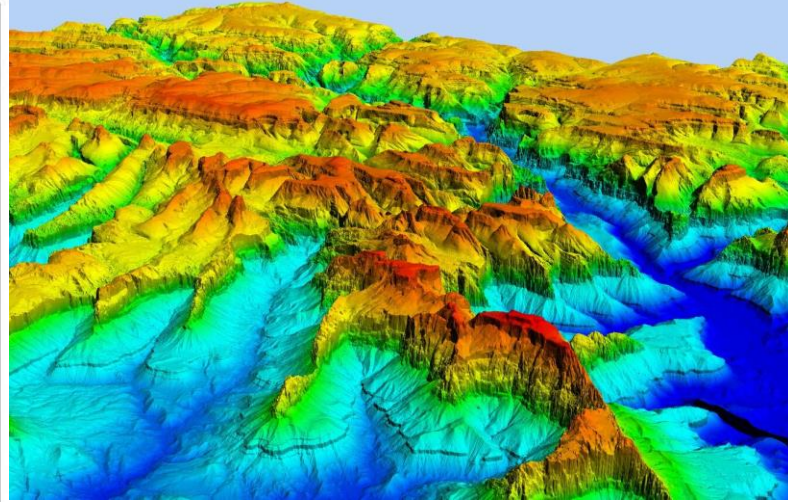
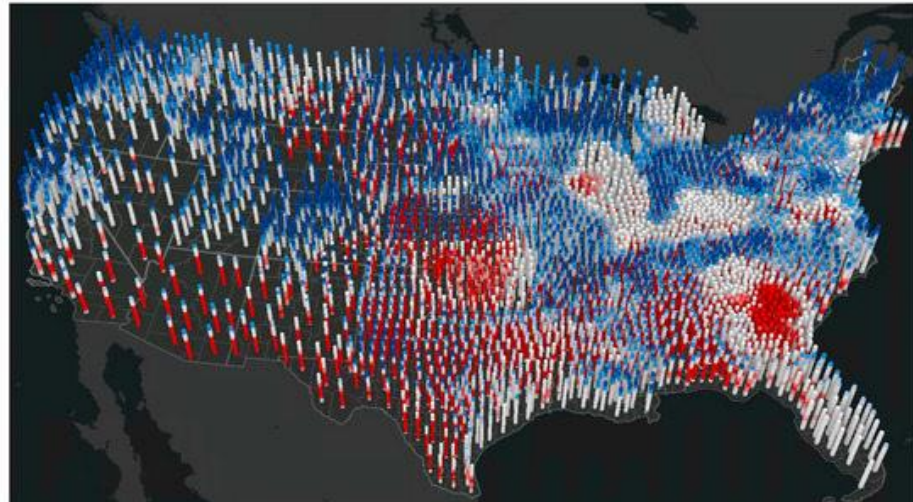
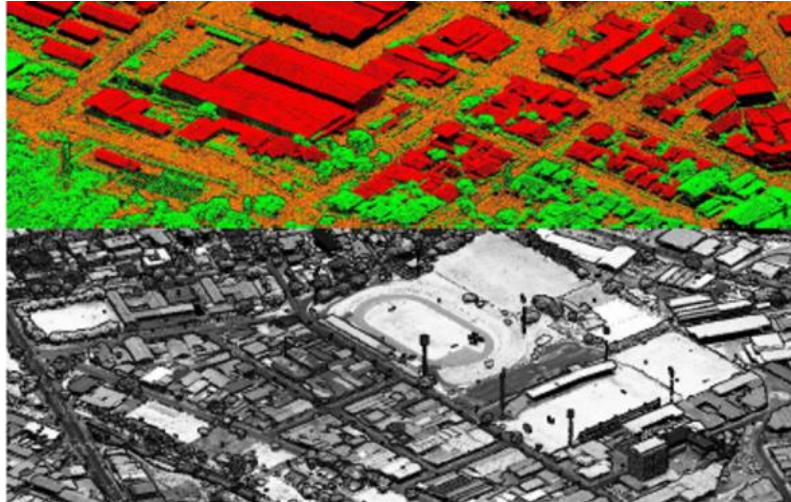


# Geospatial Information Science and Technology & Geospatial Artificial Intelligence (GIST+GeoAI)



## Graduate Certificate





**GEOSPATIAL INFORMATION SCIENCE AND TECHNOLOGY**

**& GEOSPATIAL ARTIFICIAL INTELLIGENCE**

**GIST+GeoAI GRADUATE CERTIFICATE**





**Visit our Website for Video and Information**

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<https://www.utep.edu/science/gist/about/gist.html>


- GIS Mapping and Analysis
- Machine Learning and GeoAI
- Remote Sensing
- Uncrewed Aerial Systems
- Image Processing
- Geospatial Intelligence
- Geo-Health
- Geospatial Models

# How to Enroll

- Concurrent graduate students enroll free just sending an email to Professor Hernan Moreno [moreno@utep.edu](mailto:moreno@utep.edu) to evaluate feasibility.
- External students please apply via graduate school

We have a YouTube video tutorial on how to apply to Graduate School.

<https://www.youtube.com/watch?v=MZgW8Bn14bo>

This is where you create an account and start your application process 

<https://utep.elluciancrmrecruit.com/Apply/Account/Login?ReturnUrl=%2fApply>

# Study Cases in:

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- Biology
- Environmental & Natural Resources
- Urban Planning
- Public Health & Epidemiology
- Civil & Environmental Engineering
- Business Logistics
- Geology & Mining
- Agriculture & Food Systems
- Risk and Disaster Preparation
- Archaeology & Cultural Heritage

- Industry & Government Roles
- GIS & GeoAI Analyst/Specialist
- Remote Sensing Analyst
- Machine Learning Specialist
- Geospatial Data Scientist
- Cartographer/Visualization Specialist
- Geospatial Software and App Developer
- Sector-Specific Roles
- Environmental GeoAI Conservation Specialist
- Climate Risk Modeler

- Mining & Energy: GeoAI Exploration Analyst
- Environmental Compliance Analyst
- Agriculture: Precision Agriculture GeoAI Techniques
- Public Health: Spatial Epidemiologist
- Health GeoAI Analyst
- Emergency Management: AI-Driven Disaster Response
- Research in Academia
- Research Associate
- Lab/Field Data Manager
- PhD or MSc pathway with advanced geospatial skills

- 15 Credit Hours to Earn Certificate
- If concurrent graduate student, credits double count towards degree.
- Two core courses (6 credits)
- Three Electives (9 credits)



# Core Courses (6 credits)

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**GEOL5321/6331 Introduction to GIST & GeoAI**  
(taught every semester)

**GEOL5322/6322 GeoAI & Advanced GIST**  
(only taught in the Spring semester)

# Electives (choose any 3 for 9 credits)

GEOL5303/6303 AI: Geospatial Models & Technology

GEOL5323/6333 Spatial Analysis in Earth & Environmental Science

GEOL5324/6324 Machine Learning in Geoscience

GEOL5375/6375 Quantitative Techniques in Geological Sciences

GEOP5335/6335 Introduction to Remote Sensing

GEOP5336/6336 Digital Image Processing

EE5372/6372 Image Processing

EE5373/6373 Intro to Remote Sensing Systems

BIOL5333/6333 Scientific Visualization

BIOL5363/6363 Spatial Ecology

INSS5312/6312 Commercial Imagery

INSS5355/6355 Geospatial Intelligence

SOCI5363/6363 Environmental Justice

SOCI5381/6381 Cartography and Visualization

AAAA5NNN/6NNNN Directed or Independent Study, Topics, Advanced or Special Topics:

Must be related to GIST or GeoAI and require prior approval from the program director.


<https://www.utep.edu/science/gist/program/program.html>










# Earn a MS in Professional Science with two UTEP Certificates

<https://www.utep.edu/science/academic%20programs/professional%20masters%20of%20science.html?mc-program-grad>  
<https://www.utep.edu/science/files/docs/forms/professional-masters-of-science---two-graduate-certificates.pdf>

- **Certificate 1 (Core):** must be from College of Science → *your GIST + GeoAI*
  - **Certificate 2:** can be from **ANY** college at UTEP or even external
- That means you can build **very flexible, market-driven MS pathways**

 **GIST + GeoAI**  
**(College of Science)**



-  **Big Data / Statistics** → Geo Data Scientist
-  **Water / Environmental** → Hydrology & Climate
-  **Urban Planning** → Smart Cities
-  **Business** → Consulting / Industry
-  **Systems / Construction** → Infrastructure AI
-  **Cybersecurity** → Critical Systems
-  **Technical Writing** → Communication & Leadership
- Others.. Look in Graduate Certificates Section