

# ABIGAIL LARA BURNS

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## EDUCATION

### Bachelor of Science in Geospatial Information Science

Class of 2022

The University of Texas at Dallas, School of Economic, Political and Policy Sciences – Richardson, Texas

- Fast Track Program: 9 graduate hours and admission to Master's Program

## RELEVANT COURSEWORK

Cartography and GeoVisualization

[Health and Environmental GIS](#)

[Internet Mapping and Information Processing](#)

Database Foundations

[Applied Geographic Information Systems](#)

[Advanced GIS](#)

## TECHNICAL SKILLS

Languages:

Python, ArcPy, SQL, Arcade, HTML

Applications:

ArcGIS Pro, ArcGIS Online, ArcCatalog, ERDAS  
Imagine, GeoDa, QGIS, Microsoft Excel

Functions:

Cartography, Spatial Analysis, Geostatistical  
Analysis, Data Design

## PROJECTS

[Program Design Project](#) – Jupyter Notebook, Python 3.7 (with emphasis on ArcPy & for loops)

- Allows users to graphically compare floods with existing flood datasets, featuring widgets for user input
- Calculates severity index and produces map in ArcGIS Pro with graduated symbology based on the index

[San Francisco Land Subsidence](#) – ArcGIS Pro, GPS

- Analysis of land change in the San Francisco Bay Area using GPS data, surface interpolation, and volume

[Change Detection Analysis](#) – ERDAS Imagine, Image Georeferencing and Rectification, Image Classification

- Pixel-based classification of land cover categories using unsupervised and supervised methods and change detection between aerial images of the UT Dallas campus in 2009 and 2015

## WORK EXPERIENCE

### Contract Employee

February 2022 – May 2022

NewGen Strategies & Solutions – Richardson, TX

- [Supervised object-based image classification](#) and analysis
- Tabulate impervious area and calculate ERUs for stormwater management

### GIS Coordinator PT

March 2021 – Present

Collin County Government – McKinney, TX

- Reverse-geocode to assign 9-1-1 rural addresses to burgeoning property developments
- Replicate and synchronize versioned data with NCTCOG and [perform spatial analysis](#)
- Automate feature data processes using Python scripting and ModelBuilder

## LEADERSHIP EXPERIENCE

### President - Geospatial Information Sciences Student Organization

Spring 2021 – Present

The University of Texas at Dallas, School of Economic, Political and Policy Sciences – Richardson, Texas

- Administer club duties, delegate tasks, organize biweekly meetings, and design engagement media
- Hosted and moderated UT Dallas GIS Day 2020 on Microsoft Teams with Q&A and 60+ attendees