

## Alden Felix

### Education

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**Master of Science in Social Data Analytics and Research** December 2023  
The University of Texas at Dallas, Richardson, Tx GPA: 3.91/4.0

**Bachelor of Science in International Political Economy** December 2022  
The University of Texas at Dallas, Richardson, Tx GPA: 3.82/4.0, Magna Cum Laude

### Relevant Coursework

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Data Visualization	Database Management	Natural Language Processing
Machine Learning	Applied Regression	Statistics, Calculus
Econometrics	Mathematical Economics	Upper-Level Economic Theory

### Skills

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**Data Analysis:** R (Tidyverse), Python (Pandas, NumPy)

**Machine Learning:** R, Python: Supervised/Unsupervised, Random Forest, Clustering, NLP

**Regression Analysis:** R, Python - OLS, GLM

**Data Visualization:** Tableau, R (ggplot2), Python (Matplotlib, Plotly, Altair), R Shiny, Markdown, R Quarto

**Data Collection/Query:** R, Python, SQL, PostgreSQL

### Academic Projects - <https://aldenfelix.github.io/>

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**Natural Language Processing of Tweets to Explore Mental Health** August 2023 – December 2023

*Designed as a method to survey the mental health of the public, revealing sources and intensity of stress/stressors*

- Utilized dictionary/bag of words method to capture intensity of stress during the COVID-19 Pandemic
- Applied topic modeling to capture the most common stressors during the Pandemic
- Identified methods to work around issues with NLP on noisy datasets and data collection from unorganized sources like Twitter and other social media platforms

**Predicting Interstate Affinity using Machine Learning/Database Building** January 2023 – May 2023

*Designed to generalize conflict prediction and assist the study of state affinity communities & network analysis*

- Built original database to compile relevant data that is spread across different sources
- Used Random Forests and Deep Learning to predict relationships between states

**Effect of Road Classification on Alcohol Related Crash Severity** August 2022 – December 2022

*Designed to research the causal relationship between types of roads and the severity of alcohol-related crashes*

- Collected 27,000+ accidents in Collin County from Texas Department of Transportation
- Performed regression analysis using a logit model to answer hypothesis
- Built Shiny application for interactive exploratory data analysis and dashboard for presentation

**Exploring Human Mobility using Twitter Data** August 2022 – December 2022

*Designed to explore effectiveness of twitter data for human mobility studies*

- Collected/scraped 1 million+ tweets using API and non-API methods
- Performed quantitative and qualitative analysis to explore effect of COVID-19 on mobility patterns