

# Johnathan M. Clementi

[Johnathan.clementi@gmail.com](mailto:Johnathan.clementi@gmail.com) • (484) 459-2534

[Github](#) • [Portfolio](#)

## EDUCATION

**University of Pennsylvania**, Philadelphia, PA

Master of Urban Spatial Analytics

Anticipated May 2022

**Pennsylvania State University**, World Campus

Post-Baccalaureate Certificate in Geographic Information Systems

December 2019

**Marist College**, Poughkeepsie, NY

Bachelor of Science in Environmental Science and Policy

May 2018

Minors: Computer Science and Biology

## TECHNICAL COMPETENCIES

Geo-Spatial Analytics R • ArcMap/ArcGIS Pro • ArcGIS Online • Esri Field Apps • QGIS

Statistical Analytics Predictive Modeling in R • Classification and Regression based analysis • Machine Learning

Data Analytics/Management R • Python • SQL/PostgreSQL • Git/Github

Data Visualization HTML/CSS/JavaScript • d3 • Carto • Jupyter Notebooks

Other Airflow • Google Cloud Platform • Java

## EXPERIENCE

**GIS & Cartography Supervisor, Montgomery County, Pennsylvania**

October 2020 - Present

- Supervise team of cartographers in daily updates to county tax map and assessment databases
- Update departmental procedures to improve efficiency and technological competencies
- Maintain knowledge of County regulations and procedures as it pertains to land use and development

**GIS Specialist & Assistant Planner, Sullivan County, Pennsylvania**

June 2020 – October 2020

- Managed & facilitated updates to parcel data and other spatial data in County's Enterprise Geodatabase
- Automated monthly parcel update workflow by using Python and cut 5+ hours of workflow time
- Served as administrator for subdivision process, checking plans for compliance with County SALDO

**Instructor, 'Introduction to GIS', Juniata College**

January 2020 – May 2020

- Promoted student success by implementing flexible pedagogy and illustrating excitement for topic area
- Designed course content aimed at engaging student interests and focused on the basics of GIS

## TECHNICAL PROJECTS

**New York City COVID-19 Dashboard and ETL-Pipeline**

- Deployed Airflow to Google Cloud Platform to run a daily automated ETL pipeline to power a generated dashboard [LINK]
- Automated acquisition, transformation and aggregation, and storage of six datasets pertaining to COVID-19 in NYC
- Utilized Jinja Python library to power dynamic reports of COVID-19 demographics in New York City

**House Price Predictive Model, Boulder County, Colorado**

- Engineered features using county assessment data and proprietary business data to capture home price indicators
- Utilized R library sf to analyze and capture spatial processes that factor into house prices
- Built Hedonic linear model to predict house prices based on engineered features

**Predictive Modeling of Train Arrival Time**

- Built linear model to predict magnitude of train delay using R and its libraries such as Tidyverse, Caret, Lubridate, and sf
- Engineered data features to capture the spatial and temporal lag of delays across the train network
- Presented findings and proposed mock-up of an application for transit agencies to track delays across their network

**Cost/Benefit Optimization of Government Outreach for Home Repair Tax Credit**

- Explored and analyzed existing consumer data pertaining to personal characteristics and decisions
- Engineered features, applied logistic regression, and tested prediction accuracy (ROC, Sensitivity, and Specificity)
- Constructed cost benefit analysis model and defined optimal threshold for model

## VOLUNTEERING

**URISA GIS-Corps – Disaster Photo Mapper & Admin Team**

June 2019 – Present

- Gathered and geolocated pictures and videos via social media of regions affected by natural disasters
- Promoted in 2020 to administrative team overseeing QA/QC of volunteer work

**Eagle Scout, Boy Scouts of America**

2013