

# MICHAEL C. RUGGIERO

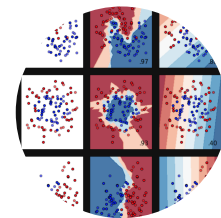
## Data Scientist

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## PROJECTS

### Efficient Packing: C++, Python

- Collaborated with Dr. Sinha from MIT to simulate packing for Lay's Chips.
- Calculated moments of inertia and dynamic friction inside Blender engine.
- Scanned actual chips using 3D scanners and Mathematica visualizations.

### Disaster Simulation: Python, Osmnx

- Identified road closures based on Twitter and MassDOT API.
- Simulated traffic based on four times of day with Google API.
- Generated disaster and optimized dispatch for police and rescue.

### Natural Language Processing: Python, TF-IDF

- Scrapped 2000 partisan subreddits for essential information.
- Calculated relationship between emotion and participation.
- Built CountVectorizer pipeline for Logistic Regression analysis.

### Campaign Planning: Python, scikit-learn

- Charted canvassing strategies with councilor Breanna Lungo-Koehn.
- Built interactive database for technical and non technical volunteers.
- Organized and scheduled optimal routes for multiple canvassers.

## EXPERIENCE

### Data Scientist

#### D\*Day Data

2015 – Present

Medford, Massachusetts

### Mathematics Teacher

#### Harmony School of Fine Art

2012 – 2013

Houston, Texas

### Mathematics Department Head

#### University of Shanghai

2007 – 2009

Shanghai, China

### Mathematics Teacher

#### Meg's English

2005 – 2007

Incheon, Korea

## ACHIEVEMENTS



### Elected to School Committee

Used k-mean clustering to organize 2017 campaign canvassing.



### Automated Farming

Using Arduino sensors, built 2 acre organic, blueberry farm.

## SKILLS

### Programming

Python

C++

Scala

### Regression

ElasticNetCV

Statsmodels

Logistic

### Clustering

DBSCAN

KNN

Spectral

### NLP

Data mining

TF-IDF

### Machine Learning

Keras

TensorFlow

PyTorch

### Data Processing

SQL

EDA

Value Imputation

### Visualization

Matplotlib

Tableau

Networkx

### Presentation

Technical Studies

Persuasion

## EDUCATION

### Data Science Immersive

#### General Assembly

Feb 2019 – Present

### MFA: English

#### Temple University

Sept 2010 – June 2012

### B.Sc. Mathematics

#### Rhode Island College

Sept 1999 – June 2003