

MICHAEL C. RUGGIERO

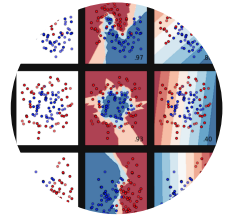
Data Scientist / Machine Learning Engineer

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EXPERIENCE

Machine Learning Engineer

iRobot

April, 2020 – May, 2021

Remote Contract

- **3D Modeling:** Built physics and lighting integration into room simulation.
- **Jupyter Notebook:** Integrated production pipeline into a readable format.
- **CUDA, Python:** Designed automated fluid simulation with textures.
- **Slack, AWS:** Managed projects with multiple team members remotely.
- **CUDA, Tensorflow:** Built Cycle GAN model to generate visual artifacts.
- **Presentation:** Enable effective decision making with the organization.

Data Scientist

Campaign to Elect Breanna Lungo-Koehn

March, 2019 – February, 2020

Medford, Massachusetts

- **Scikit-learn:** Charted and mapped canvassing strategies.
- **Python, SQL:** Built interactive database for non-technical volunteers.
- **Geolocating:** Built interactive ArcGIS visualizations to chart progress.
- **Management:** Organized routing and phone banking for canvassers.
- **NLP:** Scrapped partisan facebook/subreddits for essential information.
- **Modeling:** Used machine learning models to inform election committee.

Data Science Immersive

General Assembly

February, 2019 – June, 2019

Boston, Massachusetts

- **Machine Learning:** Simulated traffic based on Google API.
- **NLP, Web scraping:** Identified road closures based on MassDOT API.
- **Networkx:** Built graph representation for all Medford roads and traffic.
- **Pytorch:** Designed reinforcement learning AI to play pong.

Machine Learning Engineer

Lay's Potato Chips

March, 2015 – March, 2017

Remote Contract

- **Blender:** Simulated chip packing in Blender using various physics models.
- **Python, C#:** Incorporated tensors, inertia and friction into engine.
- **Data Management:** Scanned chips and programmed mesh systems.
- **Simulation:** Programmatically repaired holes in meshes with Mathematica.

Teaching Experience

Various

2005 – 2010

SKILLS

Programming

Python
C#
Mathematica

Regression

ElasticNetCV
Statsmodels

Clustering

KNN
Spectral

NLP

Data-mining
TF-IDF

Machine Learning

Pytorch
Sci-Kitlearn
TensorFlow

Data Processing

SQL
EDA

Visualization

Matplotlib
Networkx

Cloud

AWS
Docker

EDUCATION

MS: Bioinformatics

Brandeis University

April 2020 – Present

MFA: English

Temple University

Sept 2010 – June 2012

- **GPA:** 3.47

B.Sc. Mathematics

Rhode Island College

Sept 1999 – June 2003

- **GPA:** 3.1

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.