Mitchell Murphy

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GitHub
Kaggle
LinkedIn

Objective

I am very passionate about leveraging different domains in order to extract actionable insights from data and solve problems. I truly believe that we can improve all facets of humanity by teaching machines how to learn, and am seeking an opportunity where I can combine my programming, statistics, and web development skills in order to make amazing things happen.

Skills

Advanced: Python, pandas, visualization, SQL, regression, classification, NLP (NLTK, spaCy, and gensim), deep learning (TensorFlow, Keras, Pytorch, fast.ai), regular expressions, Django

Proficient: supervised/unsupervised learning, clustering algorithms, web/mobile development, Photoshop

Expert: Written & verbal communication

Recent Projects

Deep Learning for Quantum Mechanics | *SlideDeck*

Extension to previous work on applying machine learning to quantum mechanics, this time using the QM7 dataset and a convolutional neural network to predict atomization energy.

Presidential Topic Modeling

Applied semi-supervised learning approaches to extract common themes across all State of the Union addresses (1790-2018), and explored if this information had explanatory power in classifying text to political party. Used doc2vec for classification.

Machine Learning Approach to Quantum Mechanics | *SlideDeck*

Built a regression model (gradient boosting) to predict the atomization energy of molecules from initial coordinates of atoms contained within a molecule.

Experience

Fire Suppression Design Services

Developer **August 2018 –present**

- Created data-centric web application(automatic notification system) using Django and notification system using Django/Python and cron jobs.

Education

Case Western Reserve University

Computer Science & Mathematics, contrentation: Computational Biology **January 2018**

- Algorithms, databases, bioinformatics, artificial intelligence, statistics

Thinkful **April 2019**

Data Science Program

- A 6-month program experimenting with analytics using the Python coding language along with Supervised and Unsupervised Machine Learning models with a specialization in Deep Learning using TensorFlow and Keras.
- Learned industry best practices and standards by collaborating several hours every week with senior data scientists.