Garrick Suemith

Data Scientist and educator with 3 years' experience in computational modeling, 2 years' experience in teaching, and 1 year project experience in Machine Learning.

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EXPERIENCE

Data Science Fellow — *Sharpest Minds*

FEBRUARY 2020 - PRESENT - REMOTE

Building a webapp to visualize activation maps within trained CNN's and allows a user to confirm a sample image's correlation to discernable maps. Collaborating with Senior Machine Learning Engineer at Vathys, a semiconductor company.

Physics Teacher — *Bishop O'Connell High School*

AUGUST 2017 - AUGUST 2019 - ARLINGTON, VA

Taught Honors Physics and Physics-based Engineering. Introduced computational modeling to mostly first-time programmers.

Lab Intern — *George Mason University Nuclear Resonance Lab*

MAY 2013 - DECEMBER 2013 - FAIRFAX, VA

Aided in the conversion of nuclear resonance magnetometer to femtotesla-sensitive gradiometer. Designed and implemented electromagnet to distinguish spatial channels within magnetometer.

PROJECTS

CNN Feature Visualization

- Plotted activation maps of layers within pre-trained CNN's
- Chose images that resembled recognizable objects and fed the model images to verify that the layer was activated by the objects
- Developed on fast.ai platform

Income Level Classifier

- Classified California residents as potential donors from census income-level data
- One-hot encoded, normalized data, and fit it on several sklearn models
- Found AdaBoost to have best performance, accuracy, and F-score
- Used grid search to find optimal parameters with accuracy of 86.5% on test set

Transfer Learning Image Classifier

- Classified 100+ flower species from dataset of ... color photos using Pytorch
- Trained a pre-trained resnet model from torchvision with custom final layer
- Wrote command line scripts that can create, train, and test any torchvision model and customize the final layer.

NLP Disaster Response Pipeline

- Built web app for disaster responders to evaluate messages from disaster areas
- ETL pipeline tokenizes messages and saves data to sqlite database
- ML pipeline combines CountVectorizer, Tfidf, and Random Forest

SKILLS

Python, Java, C/C++, HTML

SQL, Git, Pandas, Numpy, Flask, Scikit-Learn, PCA, Fast.ai, PyTorch, NLP, ETL Pipelines

Statistics, Machine Learning, Neural Networks, OOP, Linear Algebra, Advance Calculus, Complex Analysis, Experiment Design, Physics Modeling

EDUCATION

Physics - *University of Virginia*

COURSEWORK: Quantum Mechanics, Statistical Mechanics, Electrodynamics, Computational Physics

CERTIFICATIONS

Intro to Machine Learning - *Udacity Nanodegree*

Data Science - *Udacity Nanodegree*