TAYLOR GEISLER

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Seattle, WA

SKILLS

Statistical Learning:	ML (Scikit-learn, pandas), Computer Vision (TensorFlow/Keras), NLP (spaCy)
Databases:	SQL (PostgreSQL)
Languages:	Python (Expert), C++ (Expert), Fortran (Proficient), Matlab (Expert)
Distributed Computing:	Spark (Proficient), CUDA (Proficient), MPI (Expert)

PROJECTS

Data Science Fellow - Insight Data Science *January 2020 - Present*

- Consulted with a startup, Altman, to create a natural language processing (NLP) software tool that extracts and collects hedge fund performance metrics and trends at scale from the financial news
- Trained Named Entity Recognition (NER) model, developed active learning model to raise precision and recall efficiently with the model in-the-loop
- Delivered functioning model and PostgreSQL database to client as a software tool coded in Python using the NLP library spaCy

Facial Recognition Database Tools (FRDT) *github.com/taylorGeisler/FRDT*

- Coded Python module from scratch to manage databases for general facial-recognition products
- Deployed it to automatically detect, identify celebrity faces appearing in YouTube videos using openCV for detection and Google FaceNet for embeddings

Neural Network Training Optimization

- Optimized existing software to increase the efficiency of processing large image sets during the training of neural networks
- Parallelized data processing, trained with 4 GPUs, removed bottlenecks (excessive memory allocations, unequal data partitions) resulting in 5x speedup

Fish Species Image Classification

- Classified fish species from images (10k training images, 8 labels) in Kaggle competition aiming to fight illegal fishing
- Compared performance of various methods (naive Bayes, support vector machines, random forests, pre-trained convolutional neural networks, untrained CNNs)

EXPERIENCE

Doctoral Researcher - Stanford University *September 2014 - September 2019*

- Performed numerical modeling of airflow in the lungs (total computation was in the millions of CPU hours)
- Engineered data pipelines with Python to manage data flow from cluster (GBs/simulation), managed code base
- Constructed compelling data visualizations with Matplotlib to convey weekly findings to colleagues

Process Control Engineer - APCO *October 2013 - August 2014*

- Programmed instrumentation control systems for new industrial wastewater co-generation power facility

Process Control Engineering Intern - Chevron Corporation *May 2013 - August 2013*

- Optimized control algorithm parameters of a troublesome pilot-scale unit, drastically improving process stability

EDUCATION

Stanford University, Stanford, CA *September 2014 - September 2019*
Ph.D., Chemical Engineering

University of Utah, Salt Lake City, UT *July 2011 - May 2014*
B.S., Chemical Engineering