TAYLOR GEISLER

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1601 Channing Ave, Palo Alto, CA 94303

QUALIFICATIONS

· Demonstrated ability to construct and code insightful models with predictive power

· Four years experience scraping, cleaning, analyzing, visualizing data with Python

· Scrappy and self-motivated learner, seasoned collaborator and communicator of scientific results

EDUCATION

Stanford University, Stanford, CA *2014 - August 2019 (Expected)*
Ph.D. + Masters, Chemical Engineering *Advisors: Eric Shaqfeh and Gianluca Iaccarino*
Coursework: CS229 Machine Learning, Advanced Software Development, Applied Mathematics

University of Utah, Salt Lake City, UT *Conferred 2014*
B.S., Chemical Engineering

DATA-DRIVEN PROJECTS

· **Kaggle Competition** - Cleaned data, compared various methods (naive Bayes, support vector machines, random forests, pre-trained convolutional neural networks) to classify fish species from images (10k training images, 8 labels) in competition aiming to fight illegal fishing - taylorgeisler.com.

· **Data Processing Optimization** - Wrote code to efficiently process large data sets during training of neural networks. Parallelized data processing, trained with many GPUs, removed bottlenecks (excessive memory allocations, unequal data partitioning) resulting in 5x speedup.

RELEVANT EXPERIENCE

Doctoral Research - Stanford University September 2014 - Present
Computational Fluid Dynamics

· Leveraged remote supercomputing resources (Linux) to perform mathematical modeling of airflow in the lungs with applications to drug delivery (totalling millions of CPU hours)
· Engineered data pipelines with Python to manage data flow from supercomputing cluster, managed code base
· Constructed compelling data visualizations with Matplotlib to convey weekly findings to colleagues
· Engineered unsupervised computer vision segmentation process for extracting lung regions from CT scans

Process Control Engineer - APCO October 2013 - August 2014

· Modified programming of control systems for industrial processes (cogeneration, refining) to improve performance based on process measurement data records

Process Control Intern - Chevron Corporation May 2013 - August 2013

· Optimized control algorithm parameters of a troublesome unit (pilot-scale desulfurization plant), drastically improving process stability, safety

Research Assistant - Institute for Clean and Secure Energy October 2011 - May 2013

· Designed and executed experiments to determine flame temperature, shape from infrared image data with applications to green power generation

SKILLS

Statistical Learning:	Python, Keras, TensorFlow
Strong:	Python(5 years), Matlab(10 years), C++(7 years), Fortran(5 years)
Proficient:	Javascript(2 years), CUDA(1 year), LaTeX(6 years), Git(4 years)
Communication	4 peer reviewed publications + 5 conference presentations 6 quarters as teaching assistant, led weekly review sessions (35-75 students) 2 years in West Africa as volunteer speaking French
Interests	Aspiring oil painter Currently trying to ski on every continent