

Tim Taylor

Data Scientist

Data scientist with a strong background in machine learning, image processing, and software development. An innovative, pragmatic thinker with experience taking ideas from concept to implementation.

EXPERIENCE

Rosen, Remote

Data Scientist, October 2020 – Present

- Developed algorithm to predict pipeline corrosion from magnetic flux leakage (MFL) data using a 2D convolutional neural network
 - Created training data, performed model optimization, developed validation processes, and created technical specifications
 - Applied novel approaches for data interpolation and noise reduction
 - Deployed algorithm as a service using FastAPI, gRPC, and Tensorflow serving
 - Optimized algorithm's stability, speed, and memory usage
- Developed new algorithm to automatically detect and classify installations in MFL data using YOLOv5
 - Developed semi-automated process to create training images and labels from pipeline inspection data
 - Deployed algorithm as a service and optimized model performance
- Developed algorithm to classify detected anomalies in pipelines
 - Trained Deeplabv3 model in Pytorch for semantic segmentation
 - Developed algorithm metrics and technical specifications
 - Implemented algorithm as a service using Docker, FastAPI, and gRPC
- Created service using JupyterHub for stakeholder testing and validation
- Helped to establish coding standards and mentored new hires
- Participated in the software development cycle within an Agile team
- Regularly incorporated feedback from stakeholders and applied bugfixes
- Worked with a partner university to develop new simulation algorithms

Chesapeake Energy, Oklahoma City

Staff Geophysicist, January 2012 – July 2019

- Performed multivariate statistical analysis to identify performance drivers
 - Applied PCA, clustering analysis, and regression analysis
- Applied advanced processing workflows to 3D seismic data including attribute analysis, spectral analysis, and inversion analysis
- Integrated interpretations of 3D seismic, gravity, and magnetic data and into exploration and development strategies
- Developed 2D adaptive filter in MATLAB for seismic noise reduction
- Developed algorithm to quantify magnitude and orientation of seismic anisotropy
- Proposed and oversaw acquisition of new geophysical data including surface seismic, microseismic, and resistivity surveys
- Participated in daily operations and risk analysis
- Provided mentorship and training to new geophysicists and interns

Saudi Aramco, Dhahran, Saudi Arabia

Research Intern, Summer 2010 and 2011

- Performed CFD multiphysics simulation to estimate dispersion for fluid injection
- Applied ultrasound spectroscopy to derive material properties of rock

2745 Fernwood Drive
Highland Village, TX, 75077
(405) 543-9015
ttaylor.ok@gmail.com

SKILLS

Algorithms
Signal Processing
2D/3D Image Processing
Machine learning
Convolutional Neural Networks
Multivariate Statistics
Software Development
API Development
Geospatial Analysis
Data Engineering

SOFTWARE

Python (numpy, scipy, scikit-learn, pandas, FastAPI, gRPC), Tensorflow, Pytorch, Docker, Kubeflow, Linux, Git

EDUCATION

Harvard Extension

Graduate Certificate in
Computer Programming

December 2017

Cambridge, Massachusetts

KAUST

Master of Science in Earth
Science and Engineering

December 2011 (GPA 3.46)

Thuwal, Saudi Arabia

Texas A&M

Bachelor of Science in
Mechanical Engineering

May 2010 (GPA 3.77)

College Station, TX

WEBSITES

Professional:

<https://www.linkedin.com/in/tim-taylor-b2839a105/>

Portfolio:

<https://ttgeospatial.com/>

Personal:

<https://pgtheworld.com/>