



# ABHISHAKE YADAV

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## EXPERIENCE

### Senior Geophysicist / Data Scientist

Polarcus (Dubai, U.A.E)

**Summary:** Development of AI solutions for CIRRUS cloud platform.

2019 – Present

- **Deep learning:**
  - Evaluated and tested pix2pix GAN architecture for application in seismic data super resolution.
  - Used denoising autoencoders to denoise seismic data.
  - Performed seismic data interpolation, seismic facies classification, salt body segmentation using U-Net architecture.
  - Used Microsoft deep-seismic to perform seismic imaging and interpretation on Azure using F3 seismic data.
- **Machine learning:**
  - Extracted statistical attributes from timing sensors embedded in seismic air guns to develop a fault identification algorithm using Gaussian mixture models for swift identification of air-leaks affecting seismic data quality.
  - Developed statistical algorithm for quick identification of noisy or bad seismic recording channels with 90% accuracy reducing manual checking time by up-to 70%.
- **ML web app development:**
  - Designed, developed, and deployed a web app to perform real time seismic source qc extracting data from proprietary seismic Seg-D files in real time.
- **Data mining:**
  - Delivered more than 10 data collection, description, quality, and exploratory analysis reports.
  - Analyzed terabyte-sized volumes of siloed historical data, employing a broad range of analytic tools to outline trends and better understand quality issues, equipment failures, downtime, and revenue impact.
- **Process modelling:**
  - Converted more than 40 business procedures and checklists to BPMN 2.0 diagrams.
- **Business analysis:**
  - Conducted more than 33 user interviews across organization to collect requirements for the development of organization's cloud data solution "CIRRUS".

### Geophysicist / Data Scientist

Polarcus (Dubai, U.A.E)

**Summary:** Data processing and infrastructure management.

2015 - 2019

- **Data processing and analysis:**
  - Performed complex data analysis on large-scale international projects with a cumulated value of \$500M+ for clients such as *ExxonMobil*, *Total*, and *Shell*.
  - Extracted more than 10 seismic attributes on 3D seismic volumes using clusters deployed on AWS using Dask framework for distributed computing.
- **HPC cluster management:**
  - Troubleshoot, serviced, and maintained the on-board data center (400 teraflops, 500 terabytes) while monitoring the cloud environment to identify and resolve performance issues promptly.

### Geophysicist / Data Scientist

ION GX Technology (Houston, Texas)

**Summary:** Operational analytics and quality assurance.

2012 - 2014

- **Quality assurance:**
  - Designed, implemented, optimized, and monitored various data quality control and processing solutions to assess the quality of more than 2000-3000 TB of combined data volume, on projects with a cumulated value of \$100M+.
- **Technical reporting:**
  - Created more than 50 tailored data analysis, processing, quality, and visualization reports based on project requirements vetted by scientific experts.

## EDUCATION & CERTIFICATIONS

(B.E/Bachelor of Technology) (Engineering).

2010

BPMN 2.0 Foundation and practitioner (Level 1 and 2), Azure fundamentals

## SKILLS

**Core Areas:** Deep Learning, Machine Learning, Process Improvement, Reporting, Quality assurance, Seismic data processing

**Proficient in:** Python, Scikit-learn, NumPy, Pandas, Dash, Docker, TensorFlow, Pandas, MS Azure, AWS, Heroku, Git, Dask