

ELDIN SAHBAZ

Denver, Colorado, USA
+1 (607) 597-9607 | sahbaz.eldin@gmail.com
linkedin.com/in/eldinsahbaz | github.com/eldinsahbaz

SUMMARY

- Exploration & Development Data Science leader with **7+ years of experience** delivering **multimillion-dollar** initiatives and driving **patent-pending** Artificial Intelligence and Machine Learning solutions.
- Proven ability to direct Data Science strategy, business development, and project management within British Petroleum's upstream oil & gas division — specializing in the areas of **seismic imaging, reservoir characterization, production forecasting, and drilling & completions efficiency**.

PROFESSIONAL EXPERIENCE

Senior Data Scientist

British Petroleum (BP)

February 2023 – Present

Denver, Colorado

- Directed strategy and execution for BP US onshore Data Science and ML Engineering — **achieving 47% market share** in Exploration & Development and enabling the team's **63% market share** across the division.
- Generated **US\$10MM – US\$20MM annually** in value for Reservoir Engineering — **delivering the ML Refracturing Estimator** and increasing confidence in the Business Unit's Development program by **500%**.
- Founded **the strategic partnership** with Subsurface Technology and **developed the Neural Probabilistic Seismic Imaging model** — expected to generate **US\$1.5MM annually** in drilling & completions efficiency.
- Championed AI/ML Geoscience initiatives in collaboration with Subsurface Technology for depositional facies modeling — poised to yield an **annual gain of US\$5.5MM** to a Business Unit's Development program.

Data Scientist

INFICON

June 2018 – February 2023

Syracuse, New York

- Directed **patent-pending advances** for semiconductor sensor technologies and **provisioned Neural Processing Units** for next-generation sensors — driving annual cost reductions forecasted in **excess of US\$500k**.
- Invented the Bijective Neural Architecture for density estimation — yielding a **95% increase** in accuracy.
- Led efforts defining mathematical foundations for signal processing algorithms and designed A/B tests using SciPy.stats and Nolds — delivering a **21% increase** in sensor fidelity using SciPy.optimize and Statsmodels.
- Established KPIs and executed A/B tests with simulated chemical data via PySwarms, SciPy.optimize, SciPy.stats, and SciPy.integrate — attaining **50% coverage** across chemical detection/monitoring systems.

PATENTS & PUBLICATIONS

Method of Auto Tuning One or More Sensors

U.S. Patent and Trademark Office

August 2022

Patent Pending

INVITED PRESENTATIONS

Improving Mass Spectrometry Signal Accuracy

INFICON Data Analytics Summit

November 2020

Introduction to AI and Machine Learning

INFICON Data Analytics Summit

November 2020

Automatic Text Summarization — Deep Learning & Classical Approaches

Syracuse University iSchool Poster Session

April 2018

PROFESSIONAL DEVELOPMENT

Rock Core Workshop <i>UT Austin Bureau of Economic Geology</i>	December 2023
Advanced Power BI — Power Query and DAX <i>Havens Consulting</i>	April 2023
Power BI — Reporting and Model Building <i>Havens Consulting</i>	February 2023
Linux Kernel Internals and Development (LFD420) <i>The Linux Foundation</i>	December 2019
Machine Learning for Model Predictive Control & Process Analytics <i>Dr. S. Joe Qin</i>	June 2019

HONORS & AWARDS

Graduate Merit Scholarship <i>Syracuse University</i>	August 2017 – May 2018
Summa Cum Laude <i>Syracuse University</i>	May 2017
The Warren Semon Prize <i>Syracuse University</i>	May 2017
Dean's Leadership Grant <i>Syracuse University</i>	September 2014
Dean's List <i>Syracuse University</i>	August 2014 – May 2017
The Founders' Scholarship <i>Syracuse University</i>	August 2014 – May 2017

EDUCATION

Syracuse University <i>Master of Science Computer Science</i>	May 2018
Syracuse University <i>Bachelor of Science Computer Science</i>	May 2017 <i>Summa Cum Laude</i>

SKILLS & COMPETENCIES

Software & Tools	AWS SageMaker, Linux, Git, Python, PyTorch, Scikit-learn, Statsmodels, Pandas, SciPy, NumPy, NLTK, Gensim, OpenCV, Seaborn, Matplotlib, NetworkX
Competency Areas	AI, Deep Learning, Machine Learning, Statistical Learning, Linear & Nonlinear Modeling, Numerical Optimization, Regression, Classification, Statistics, Probability, Time Series, Statistical Signal Processing, Data Analysis, Data Mining