

# ELDIN SAHBAZ

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## SUMMARY

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- Exploration & Development Data Science leader with **7+ years of experience**; driving AI/ML-based innovation within British Petroleum's (BP) upstream oil & gas division in the areas of seismic interpretation, reservoir characterization, production forecasting, and drilling & completions efficiency.
- Proven ability to generate quantifiable business results — directing strategy and business development, stakeholder management, project management, and intellectual property development.
- Demonstrated proficiency in identifying and delivering innovative, **patent-pending**, Artificial Intelligence and Machine Learning solutions.

## PROFESSIONAL EXPERIENCE

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### Senior Data Scientist

*British Petroleum (BP)*

February 2023 – Present

*Denver, Colorado*

- Directed the strategic alignment of priorities, institutionalized streamlined processes, and oversaw ML Engineering — enabling the team to **acquire 63%** of British Petroleum's US onshore oil and gas AI/ML market.
- Launched targeted sales campaigns resulting in a **33% acquisition** of British Petroleum's AI/ML market for US onshore oil and gas Exploration and Development, accounting for **35% of the Data Science portfolio** — projecting a **17% increase** in successful Exploration and Development programs for unconventional resources.
- Generated **US\$10MM – US\$20MM annually** in value for a Business Unit's Reservoir Engineering team by **delivering the ML Refracturing Estimator** — increasing confidence in analyses by up to **500%**.
- Founded **the strategic partnership** with Subsurface Technology and **launched the joint Geophysics initiative** — expecting to generate **US\$1.5MM annually** in drilling & completions efficiency.
- Championed AI/ML Geoscience initiatives in collaboration with Subsurface Technology — poised to yield an annual realization of **US\$5.5MM at a 1% gain** to a Business Unit's Development program.
- Managed an intern's artificial lift predictive maintenance proof-of-concept aimed at minimizing production deferment in wells with electric submersible pumps — forecasting an **11% increase in operational savings**.

### 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 an A/B test 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

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### Method of Auto Tuning One or More Sensors

*U.S. Patent and Trademark Office*

August 2022

*Patent Pending*

## INVITED PRESENTATIONS

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**Improving Mass Spectrometry Signal Accuracy**  
*INFICON Data Analytics Summit*

November 2020

**Automatic Text Summarization — Deep Learning & Classical Approaches**  
*Syracuse University iSchool Poster Session*

April 2018

**Characterizing Popularity Growth for Social Media Content**  
*Electrical Engineering & Computer Science REU Seminar*

August 2017

## PROFESSIONAL DEVELOPMENT

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**Rock Core Workshop**  
*UT Austin Bureau of Economic Geology*

December 2023

**Advanced Power BI — Power Query and DAX**  
*Havens Consulting*

April 2023

**Machine Learning for Model Predictive Control & Process Analytics**  
*Dr. S. Joe Qin*

June 2019

## HONORS & AWARDS

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**Graduate Merit Scholarship**  
*Syracuse University*

August 2017 – May 2018

**Summa Cum Laude**  
*Syracuse University*

May 2017

**The Warren Semon Prize**  
*Syracuse University*

May 2017

**Dean's Leadership Grant**  
*Syracuse University*

September 2014

**Dean's List**  
*Syracuse University*

August 2014 – May 2017

**The Founders' Scholarship**  
*Syracuse University*

August 2014 – May 2017

## EDUCATION

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**Syracuse University**  
*Master of Science | Computer Science*

May 2018

**Syracuse University**  
*Bachelor of Science | Computer Science*

May 2017  
*Summa Cum Laude*

## SKILLS & COMPETENCIES

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**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