

# ELDIN SAHBAB

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## 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 (BP) 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 **delivered 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*

## EDUCATION

### Syracuse University

*Master of Science | Computer Science*

May 2018

### Syracuse University

*Bachelor of Science | Computer Science*

May 2017

*Summa Cum Laude*

## 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