

# ELDIN SAHBAB

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

## 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*

## 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

---

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

## HONORS & AWARDS

---

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

## EDUCATION

---

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

## SKILLS & COMPETENCIES

---

<b>Software &amp; Tools</b>	AWS SageMaker, Linux, Git, Python, PyTorch, Scikit-learn, Statsmodels, Pandas, SciPy, NumPy, NLTK, Gensim, OpenCV, Seaborn, Matplotlib, NetworkX
<b>Competency Areas</b>	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