

# ELDIN SAHBAB

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## SUMMARY

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Program Manager and Data Scientist with **7+ years of proven success** establishing and scaling transformative, enterprise-level, AI/ML initiatives across the Petroleum and Semiconductor industries. Led the Data Science team's **63% market share** in AI developments across British Petroleum's US onshore O&G business and independently produced **US\$997MM in value**. Delivered **patent-pending** AI solutions in computational chemistry — **valued at US\$500M+ annually** — for INFICON's Semiconductor business.

## PROFESSIONAL EXPERIENCE

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### Program Manager

*British Petroleum (BP)*

November 2023 – Present

*Denver, Colorado*

- Directed and executed strategy 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.
- Managed and deployed the Long-term Production Risk Assessment Simulation tool for Reservoir Engineering.
- Oversaw the AWS migration for PowerBI reports monitoring the Productivity Index and Saltwater Disposal.

### Senior Data Scientist

*British Petroleum (BP)*

February 2023 – Present

*Denver, Colorado*

- Drove **US\$977MM** in the Bone Spring formation with a **US\$700MM NPV** well development plan, **US\$250MM D&C**, and cutting **US\$27MM** in core collection — launching **ML Lithology Recognition**.
- Generated **US\$20MM annually** in value for Reservoir Engineering's EOR initiatives — **delivering the ML Refracturing Estimator** and increasing confidence in the Business Unit's Development program by **500%**.

### Data Scientist

*INFICON*

June 2018 – February 2023

*Syracuse, New York*

- Directed the Automated Sensor Calibration development program for semiconductor sensor technologies — delivering **patent-pending advances** driving annual cost reductions forecasted in **excess of US\$500M**.
- 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

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### Method of Auto Tuning One or More Sensors

*USPTO Application 18/686,753*

February 2024

*Patent Pending*

## PROFESSIONAL DEVELOPMENT

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### Core Analysis Workshop

*UT Austin Bureau of Economic Geology*

April 2024/December 2023

### Advanced Power BI — Power Query and DAX

*Havens Consulting*

April 2023

**Power BI — Reporting and Model Building**  
*Havens Consulting*

February 2023

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

June 2019

## INVITED PRESENTATIONS

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**Neural Attention for Seismic Data Processing**  
*BP Geophysics R&D Seminar*

July 2024

**Improving Mass Spectrometry Signal Fidelity**  
*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

## 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, SLB Techlog

**Competency Areas** AI, Deep Learning, Machine/Statistical Learning, Linear & Nonlinear Modeling, Numerical Optimization, Regression, Classification, Statistics, Probability, Time Series, Statistical Signal Processing, Data Analysis, Data Mining, Agile, CRISP-DM