

# ELDIN SAHBAB

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## SUMMARY

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- Upstream O&G Data Science leader and Program Manager with **7+ years of experience** — specializing in seismic imaging, reservoir characterization, production forecasting, and drilling & completions efficiency.
- Produced **US\$20MM in annual value** and secured a **63% market share** in new AI developments across British Petroleum's US onshore O&G business. Delivered **patent-pending** AI solutions — **valued at US\$500k+ annually** — in computational chemistry for INFICON's Semiconductor business.

## PROFESSIONAL EXPERIENCE

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### Senior Data Scientist; Program Manager

*British Petroleum (BP)*

February 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.
- 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%**.
- Launched the **strategic partnership** with Subsurface Technology for **Geophysics & Geoscience**, modeling unconventional depositional systems — expected to yield **US\$5.5MM annually** for an asset program.

### Data Scientist

*INFICON*

June 2018 – February 2023

*Syracuse, New York*

- Delivered **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

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### Method of Auto Tuning One or More Sensors

*U.S. Patent and Trademark Office*

August 2022

*Patent Pending*

## PROFESSIONAL DEVELOPMENT

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### Core Analysis Workshop

*UT Austin Bureau of Economic Geology*

December 2023

### Advanced Power BI — Power Query and DAX

*Havens Consulting*

April 2023

### Power BI — Reporting and Model Building

*Havens Consulting*

February 2023

### Linux Kernel Internals and Development (LFD420)

*The Linux Foundation*

December 2019

**Machine Learning for Model Predictive Control & Process Analytics**

June 2019

*Dr. S. Joe Qin*

**Embedded Linux Development with Yocto Project (LFD460)**

June 2018

*The Linux Foundation*

## INVITED PRESENTATIONS

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**Improving Mass Spectrometry Signal Fidelity**

November 2020

*INFICON Data Analytics Summit*

**Introduction to AI and Machine Learning**

November 2020

*INFICON Data Analytics Summit*

**Automatic Text Summarization — Deep Learning & Classical Approaches**

April 2018

*Syracuse University iSchool Poster Session*

**Characterizing Popularity Growth for Social Media Content**

August 2017

*Electrical Engineering & Computer Science REU Seminar*

## HONORS & AWARDS

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**Graduate Merit Scholarship**

August 2017 – May 2018

*Syracuse University*

**Summa Cum Laude**

May 2017

*Syracuse University*

**The Warren Semon Prize**

May 2017

*Syracuse University*

**Dean's Leadership Grant**

September 2014

*Syracuse University*

**Dean's List**

August 2014 – May 2017

*Syracuse University*

**The Founders' Scholarship**

August 2014 – May 2017

*Syracuse University*

## EDUCATION

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**Syracuse University**

May 2018

*Master of Science | Computer Science*

**Syracuse University**

May 2017

*Bachelor of Science | Computer Science*

*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