# ELDIN SAHBAZ

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## SUMMARY

- Upstream O&G Data Science Program Manager and leader with **7+ years of experience** — specializing in seismic imaging, reservoir characterization, production forecasting, and drilling & completions efficiency.

- Produced **US$20MM in annual value** independently and led the team's **63% market share** in AI developments across British Petroleum's US onshore business. Delivered **patent–pending** AI solutions in computational chemistry — **valued at US$500k+ annually** — for INFICON's Semiconductor business.

## PROFESSIONAL EXPERIENCE

**Senior Data Scientist; Program Manager** — February 2023 – Present
*British Petroleum (BP)* — *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.
- Managed and deployed the Long-term Production Risk Assessment Simulation tool for Reservoir Engineering.

**Data Scientist** — June 2018 – February 2023
*INFICON* — *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

**Method of Auto Tuning One or More Sensors** — August 2022
*U.S. Patent and Trademark Office* — *Patent Pending*

## PROFESSIONAL DEVELOPMENT

**Core Analysis Workshop** — December 2023
*UT Austin Bureau of Economic Geology*

**Advanced Power BI — Power Query and DAX** — April 2023
*Havens Consulting*

**Power BI — Reporting and Model Building** — February 2023
*Havens Consulting*

**Linux Kernel Internals and Development (LFD420)** December 2019
*The Linux Foundation*

**Machine Learning for Model Predictive Control & Process Analytics** June 2019
*Dr. S. Joe Qin*

## INVITED PRESENTATIONS

**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

**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

**Syracuse University** May 2018
*Master of Science | Computer Science*

**Syracuse University** May 2017
*Bachelor of Science | Computer Science* *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