

# ELDIN SAHBAZ

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## SUMMARY

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- Data science leader with **7 years of experience**, driving AI/ML-based innovation within British Petroleum's (BP) upstream oil & gas division in the areas of seismic interpretation, reservoir characterization, production forecasting, drilling & completions efficiency, production optimization, and predictive maintenance.
- Proven ability to generate quantifiable business results — directing strategy and business development, stakeholder management, project management, and intellectual property development.
- Demonstrated proficiency in identifying and delivering innovative, **patent-pending**, Artificial Intelligence and Machine Learning solutions.

## PROFESSIONAL EXPERIENCE

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**Senior Data Scientist**  
*British Petroleum (BP)*

February 2023 – Present  
*Denver, Colorado*

- Acquired a **25% share** of the internal upstream AI/ML market, **accounting for 67%** of the Data Science portfolio, by cultivating a **200% increase** in Data Science project intake requests — projecting a **17% increase** in successful unconventional reservoir exploration and development via fit-for-purpose innovation.
- Founded **the strategic partnership** with Subsurface Technology and **launched the joint** Geophysics initiative to elucidate stratigraphic attributes from depth migrated seismic stack volumes — expecting to **generate US\$1.5MM annually** from drilling & completions hazard prevention and increased oil & gas production.
- Managed an intern's artificial lift predictive maintenance proof-of-concept aimed at minimizing production deferment in electric submersible pump (ESP) wells — forecasting an **11% increase in operational savings**.

**Data Scientist**  
*INFICON*

June 2018 – February 2023  
*Syracuse, New York*

- Directed **patent-pending advances** for semiconductor sensor technologies utilizing Scikit-learn, fastDTW, Statsmodels.tsa, SciPy.stats, SciPy.interpolate, SciPy.optimize, and SQL — **provisioning Neural Processing Units** for next-generation sensors and driving annual cost reductions forecasted **in excess of US\$500k**.
- Invented a bijective neural network for density estimation via PyTorch — yielding a **95% increase** in accuracy.
- Led efforts defining mathematical foundations for signal processing algorithms and designed an A/B test 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*

## INVITED PRESENTATIONS

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**Improving Mass Spectrometry Signal Accuracy**  
*INFICON Data Analytics Summit*

November 2020

**Get Started with Machine Learning and AI**  
*INFICON Data Analytics Summit*

November 2020

**Automatic Text Summarization — Deep Learning & Classical Approaches**  
*Syracuse University iSchool Poster Session*

April 2018

**Characterizing Popularity Growth of Social Media Content**  
*Electrical Engineering & Computer Science REU Seminar*

August 2017

## PROFESSIONAL DEVELOPMENT

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**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**  
*Dr. S. Joe Qin*

June 2019

## 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, 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