ELDIN SAHBAZ

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

SUMMARY

- 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

Senior Data Scientist February 2023 – Present
British Petroleum (BP) *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** in drilling & completions efficiency 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 June 2018 – February 2023
INFICON *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

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

INVITED PRESENTATIONS

Improving Mass Spectrometry Signal Accuracy November 2020
INFICON Data Analytics Summit

Get Started with Machine Learning and AI November 2020
INFICON Data Analytics Summit

Automatic Text Summarization — Deep Learning & Classical Approaches April 2018
Syracuse University iSchool Poster Session

Characterizing Popularity Growth of Social Media Content August 2017
Electrical Engineering & Computer Science REU Seminar

PROFESSIONAL DEVELOPMENT

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

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