

ELDIN SAHBAB

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SUMMARY

Program Manager and Data Scientist with **~8 years of proven success** delivering key business objectives. Established and scaled transformative, enterprise-level, Artificial Intelligence initiatives across the Petroleum and Semiconductor industries. Enabled Data Science's **65% AI/ML market share** across all business functions within British Petroleum's US onshore O&G division and independently produced **US\$997MM in value**. Delivered **patent-pending** AI-powered computational chemistry solutions — **valued at US\$500M+ annually** — for INFICON's Semiconductor business.

PROFESSIONAL EXPERIENCE

Program Manager

British Petroleum (BP)

November 2023 – Present

Denver, Colorado

- Directed and executed Data Science and ML Engineering Digital Transformation strategies — **achieving 45% market share** in Exploration & Development and enabling the team's **65% overall market share** across the organization.
- Managed and deployed the Long-term Production Risk Assessment Simulation application for Reservoir Engineering.
- Oversaw AWS PowerBI report migration monitoring **Salt Water Disposal** and the **Productivity Index**.

Senior Data Scientist

British Petroleum (BP)

February 2023 – Present

Denver, Colorado

- Generated **US\$977MM in revenue** for the Bone Spring formation with a well development plan **NPV of US\$700MM**, Drilling & Completions cost reductions of **US\$250MM**, and core collection cost avoidance amounting up to **US\$27MM** — launching **AI Lithofacies Prediction** and enabling regional fluid mobility and reservoir quality assessments.
- Drove **US\$20MM annually** in value for Reservoir Engineering's EOR initiatives — productionalizing the **ML Refracting Estimator** and increasing confidence in the Business Unit's well development plan 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** and driving annual cost reductions forecasted **in excess of US\$500M**.
- Led cross-functional efforts defining mathematical foundations for signal processing algorithms and designed A/B tests via SciPy.stats and Nolds — delivering a **21% increase in sensor fidelity** using SciPy.optimize and Statsmodels.
- Invented the Bijective Neural Architecture for density estimation via PyTorch — yielding a **95% increase** in accuracy.
- Established KPIs and executed simulation A/B tests with synthetic chemical data built using PySwarms, SciPy.optimize, SciPy.stats, and SciPy.integrate — attaining **50% coverage** across chemical detection and monitoring systems.

Research Assistant

Syracuse University | Data Lab

June 2017 – August 2017

Syracuse, New York

- Modeled social media engagement metrics, formulating repeated measures experiments, utilizing Scikit-learn and NLTK.

Technology Analyst

JPMorgan Chase & Co.

June 2016 – August 2016

Jersey City, New Jersey

- Developed project business cases alongside senior team members and deployed code to live internal JPMC applications.

Software Engineer

Self-employed

June 2015 – September 2015

Syracuse, New York

- Engineered information retrieval systems for **British Petroleum** and local government clients as a subcontractor.

Undergraduate Research Assistant

Syracuse University | Hosein Research Group

August 2014 – May 2015

Syracuse, New York

- Awarded the **Dean's Leadership Grant** supporting simulation studies quantifying energy loss across solar cell surfaces.

PATENTS & PUBLICATIONS

Method of Auto Tuning One or More Sensors <i>USPTO Application 18/686,753</i>	February 2024 <i>Patent Pending</i>
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INVITED PRESENTATIONS

Neural Attention for Seismic Data Processing <i>BP Geophysics R&D Seminar</i>	July 2024
Improving Mass Spectrometry Signal Fidelity <i>INFICON Data Analytics Summit</i>	November 2020
Automatic Text Summarization — Deep Learning & Classical Approaches <i>Syracuse University iSchool Poster Session</i>	April 2018

PROFESSIONAL DEVELOPMENT

Core Analysis Workshop <i>UT Austin Bureau of Economic Geology</i>	April 2024/December 2023
Advanced Power BI — Power Query and DAX <i>Havens Consulting</i>	April 2023
Machine Learning for Model Predictive Control & Process Analytics <i>Dr. S. Joe Qin, President of Lingnan University</i>	June 2019

HONORS & AWARDS

Graduate Merit Scholarship <i>Syracuse University</i>	August 2017 – May 2018
Summa Cum Laude <i>Syracuse University</i>	May 2017
The Warren Semon Prize <i>Syracuse University</i>	May 2017
Dean’s Leadership Grant <i>Syracuse University</i>	September 2014
Dean’s List <i>Syracuse University</i>	August 2014 – May 2017
The Founders’ Scholarship <i>Syracuse University</i>	August 2014 – May 2017

EDUCATION

Syracuse University <i>Master of Science Computer Science</i>	May 2018
Syracuse University <i>Bachelor of Science Computer Science</i>	May 2017 <i>Summa Cum Laude</i>

SKILLS & COMPETENCIES

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