

ELDIN SAHBAZ

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SUMMARY

Data science leader with 6+ years of experience generating quantifiable business results — delivering innovative patent-pending machine learning and artificial intelligence solutions. Demonstrated skills performing business development and stakeholder management, leading projects, and interfacing with cross-functional teams.

PROFESSIONAL EXPERIENCE

Senior Data Scientist

BP

February 2023 - Present

Denver, Colorado

- Managed business development initiatives and established a strategic partnership with Subsurface Technology — identifying opportunities projected to increase unconventional reservoir exploration success by 17%.
- Enhanced environmental anomaly detection via Scikit-learn and EMD — achieving a 99% increase in F1 score.

Data Scientist

INFICON

June 2018 - February 2023

Syracuse, New York

- Directed patent-pending advances in computational chemistry for semiconductor sensor technologies via machine learning for time series utilizing PyTorch, Scikit-learn, fastDTW, Statsmodels.tsa, SciPy.stats, SciPy.interpolate, and SciPy.optimize — driving annual cost reductions forecasted to be in excess of US\$500k.
- Executed continuous improvement efforts for process automation and optimization by creating a novel bijective/invertible deep neural network utilizing PyTorch — achieving a 95% increase in model accuracy.
- Led technical reviews to define mathematical foundations for sensor processing algorithms — documenting their premises and implementation logic, designing an A/B test using SciPy.stats and Nolds, and delivering an improved algorithm using SciPy.optimize and Statsmodels — realizing a 21% increase in sensor accuracy.
- Established KPIs and executed simulation A/B tests via synthetic chemical data utilizing PySwarms, SciPy.optimize, SciPy.stats, and SciPy.integrate — yielding 50% coverage across chemical detection/monitoring systems.

Research Experience for Undergraduates

Syracuse University

June 2017 - August 2017

Syracuse, New York

- Conducted research under the supervision of Dr. Reza Zafarani (Electrical Engineering and Computer Science).
- Modeled the expected number of views for social media content via an ensemble of boosting classifiers.

Software Engineer

Self-employed

June 2015 – September 2015

Syracuse, New York

- Sub-contracted on document management systems for government clients and a Forbes Global 2000 client.

Undergraduate Research Assistant

Syracuse University

August 2014 - May 2015

Syracuse, New York

- Conducted research under the supervision of Dr. Ian Hosein (Biomedical and Chemical Engineering).
- Awarded the Dean's Leadership Grant in support of ambitious undergraduate research endeavors.
- Quantified energy loss on solar cell surfaces via wave propagation models that simulate light trajectories.

PATENTS & PUBLICATIONS

Method of Auto Tuning One or More Sensors

U.S. Patent and Trademark Office

August 2022

Patent Pending

INVITED PRESENTATIONS

Improving Mass Spectrometry Signal Accuracy <i>INFICON Data Analytics Summit</i>	November 2020
Get Started with Machine Learning and AI <i>INFICON Data Analytics Summit</i>	November 2020
Automatic Text Summarization — Deep Learning & Classical Approaches <i>Syracuse University iSchool Poster Session</i>	April 2018
Characterizing Popularity Growth of Social Media Content <i>Electrical Engineering & Computer Science REU Seminar</i>	August 2017

PROFESSIONAL DEVELOPMENT

Power BI — Reporting and Model Building <i>Havens Consulting</i>	February 2023
Linux Kernel Internals and Development (LFD420) <i>The Linux Foundation</i>	December 2019
Machine Learning Workshop — Model Predictive Control & Process Analytics <i>Dr. S. Joe Qin</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	Python, PyTorch, Scikit-learn, Statsmodels, Pandas, SciPy, NumPy, NLTK, Gensim, OpenCV, Seaborn, Matplotlib, NetworkX, AWS SageMaker, Power BI, Linux, Git
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