ELDIN SAHBAZ

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SUMMARY

Data science leader with 6 years of experience generating quantifiable business results in cost reduction and process optimization — delivering innovative patent pending AI–powered solutions. Demonstrated experience scoping and leading projects, designing robust unbiased studies and experiments, analyzing time series and signals, composing custom machine learning and artificial intelligence models/algorithms, interfacing with cross–functional teams and communicating insights to stakeholders, and deploying models to production.

PROFESSIONAL EXPERIENCE

Data Scientist   June 2018 - Present
INFICON   *Syracuse, New York*

- Directed patent pending advances in manufacturing optimization 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 automation with projected annual cost savings in excess of US$500k.
- 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 — yielding a 21% increase in sensor accuracy.
- Managed studies examining and establishing theoretical foundations for chemical detection and monitoring systems — contributing to high–priority product development efforts expected to yield 52% revenue growth.
- Established KPIs and executed simulation A/B tests via synthetic data utilizing PySwarms, SciPy.optimize, SciPy.stats, and SciPy.integrate — yielding 50% coverage across chemical detection and monitoring systems.

PATENTS & PUBLICATIONS

Bijective Neural Network for Density Estimation   November 2022
U.S. Patent and Trademark Office   *Patent Pending*

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

INVITED PRESENTATIONS

Data Science for the Mass Spectrometer   November 2020
INFICON Data Analytics Summit

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	Python, PyTorch, Scikit–learn, Statsmodels, Pandas, SciPy, NumPy, NLTK, Gensim, OpenCV, Nolds, Seaborn, Matplotlib, NetworkX, billiard, ctypes, 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