

# ELDIN SAHBAZ

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## SUMMARY

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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

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### Data Scientist

INFICON

June 2018 - Present

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.
- Executed continuous improvement efforts by creating a novel bijective/invertible deep neural network for manufacturing optimization and automation 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 — 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

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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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### Data Science for the Mass Spectrometer

INFICON Data Analytics Summit

November 2020

## 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** 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