

# ELDIN SAHBAZ

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## SUMMARY

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Recognized data science leader with a proven track record of delivering innovative solutions and intelligent algorithms for chemical sensing technologies. Experienced in planning and scoping research projects, designing experiments, analyzing time series and signals, developing custom machine learning and artificial intelligence models, communicating insights to stakeholders, and interfacing with cross-functional teams to deploy models to production. Produced state-of-the-art solutions for semiconductor sensor technologies — generating a 21% gain in sensor accuracy and optimizing manufacturing with annual projected cost savings above US\$500k.

## PROFESSIONAL EXPERIENCE

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### Data Scientist

*INFICON*

June 2018 - Present

*Syracuse, New York*

- Directed significant state-of-the-art innovations and technical developments in manufacturing optimization for semiconductor sensor technologies utilizing the fastDTW, Nolds, Statsmodels.tsa, SciPy.interpolate, and SciPy.optimize Python libraries — driving projected annual cost savings in excess of US\$500k.
- Managed technical reviews to define mathematical foundations for sensor processing algorithms — documenting their implementation logic and assumptions, 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.
- Led studies examining and establishing theoretical foundations for chemical detection and monitoring systems — contributing to a larger product development effort with 52% expected revenue growth.
- Created simulation-based compound identification A/B tests covering 50% of the chemical detection and monitoring systems — synthesizing chemical data via SciPy.optimize, SciPy.stats, SciPy.integrate, and PySwarms.

## INVITED PRESENTATIONS

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### Data Science for the Mass Spectrometer

*INFICON Data Analytics Summit*

November 2020

### Get Started with Machine Learning and AI Today!

*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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**Programming Languages** Python, MATLAB, R, SQL, C++

### Software & Tools

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 Modeling, Nonlinear Modeling, Numerical Optimization, Regression, Classification, Statistics, Probability, Time Series Analysis, Statistical Signal Processing, Data Analysis, Data Mining, Data Visualization, Algorithms, Design Patterns