

# ELDIN ŠAHBAZ

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## SUMMARY

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Accomplished data scientist with more than three years of progressive professional experience in a multinational company. Proven ability to plan and lead projects, design experiments, analyze time series and signals, conduct algorithmic research and development in artificial intelligence and machine learning, and communicate insights to stakeholders. Applied expertise in modeling complex chemical processes via chromatography and mass spectrometry data. Successfully improved mass spectrometry signal quality — reducing error by 21%.

## PROFESSIONAL EXPERIENCE

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### Research & Development Engineer

*INFICON*

June 2018 - Present

*Syracuse, New York*

- Reported on data science initiatives directly to the Senior Director of Development for Intelligent Sensor Solutions.
- Conducted global presentations and counseled R&D teams — facilitating literature searches and technical reviews.
- Collaborated with stakeholders to elucidate research objectives and directions from high-level problem statements.
- Supported product development efforts — conducting basic research and establishing performance benchmarks.
- Interfaced with software engineers to facilitate migrating algorithmic research and findings to existing technologies.
- Led and planned data science initiatives in a cross-functional environment — completing 10 studies and projects.
- Audited system performance via simulation studies — covering 58% of chemical detectors and gas analyzers.
- Devised a mass spectrometry A/B model test — quantifying a 56% difference between legacy model test results.
- Improved mass spectrometry sensor performance and signal quality with a 21% reduction in estimation error.
- Developing parameter optimization techniques for quadrupole mass filters — projecting ~\$500k annual savings.

## ACADEMIC APPOINTMENTS

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### Research Experience for Undergraduates (REU)

*Syracuse University ♦ Data Lab*

June 2017 - August 2017

*Syracuse, New York*

- Conducted research under the supervision of Dr. Reza Zafarani (Electrical Engineering and Computer Science).
- Formulated a repeated measures experiment — querying structured and unstructured social media content.
- Modeled expected content attention — minimizing dimensionality while maximizing the cross-validation score.

## EDUCATION

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### Syracuse University

Non-Matriculated Graduate ♦ Mathematics

*May 2021*

### Syracuse University

Master of Science ♦ Computer Science

*May 2018*

### Syracuse University

Bachelor of Science ♦ Computer Science

*May 2017*

Summa Cum Laude

## PROFESSIONAL DEVELOPMENT

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### Linux Foundation

Linux Kernel Internals and Development (LFD420)

*December 2019*

### Linux Foundation

Embedded Linux Platform Development with Yocto Project (LFD460)

*June 2018*

## SKILLS & COMPETENCIES

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

**Software & Tools** PyTorch, Scikit-learn, Statsmodels, Pandas, SciPy, NumPy, Matplotlib, Linux, Git

**Competency Areas** AI, Deep Learning, Machine Learning, Statistical Learning, Linear & Nonlinear Modeling, Regression, Classification, Statistics, Probability, Time Series Analysis, Statistical Signal Processing, Data Analysis, Data Mining, Data Visualization