

# ELDIN SAHBAZ

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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 physics and electrical sensor 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.
- Investigated and applied expertise to mass spectrometry sensor data for system and manufacturing processes.
- Counseled internal R&D teams, e.g., facilitated literature searches, discussed approaches, and partook in reviews.
- Supported product development efforts — conducting basic research and establishing performance benchmarks.
- Lead and planned data science initiatives in a cross-functional environment — completing 10 studies and projects.
- Collaborated with stakeholders to elucidate research objectives and directions from high-level problem statements.
- Coordinated with physical scientists to integrate domain expertise into the experiments and predictive models.
- Interfaced with software engineers to facilitate migrating algorithmic research and findings to existing technologies.
- 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.
- Automating mass analyzer parameter optimization for Manufacturing — projecting 50% gains in signal sensitivity.

## 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**  
Postgraduate ♦ Mathematics

*May 2021*

**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++

**Certificates** Linux Kernel Internals and Development (LFD420)

**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

**Soft Skills** Communication, Teamwork, Decision Making, Project Planning, Time Management