

Conner Stevens

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Professional Summary

Data Scientist/Physicist with technical leadership experience and exceptional computational and quantitative skills. I have 3 years of working experience in academia and 2 additional years in industry. I'm highly skilled in exploratory data science and building insightful perspectives from it. Extensive experience using Python and MATLAB in data analysis/visualization and machine/deep learning. My interdisciplinary breadth offers unique perspectives and ideas to the space payloads, quantum, and data science teams I have rotated through at General Dynamics Mission Systems.

Experience

General Dynamics Mission Systems (GDMS)

Scottsdale, AZ

SR. DATA SCIENTIST/ELECTRICAL ENGINEER

Jul 2022 - Present

- Performed data analysis and visualization techniques across multiple lines of business at GDMS, including space hardware test data, an **AI/ML-based restricted program**, and quantum sensor technology
- Written and maintained a library of **100+ MATLAB scripts** tailored to analyze and visualize test data of **RF-based space hardware**
- Presented in dozens of customer and internal meetings on research analysis and data visualizations based on these MATLAB scripts

SR. QUANTUM ENGINEER

- Created dozens of data processing tools/scripts in **MATLAB** and **Python** that parsed, manipulated, and visualized data from quantum communication and **Rydberg atom sensor systems**
- Planned and performed lab experiments related to **free-space** and **fiber optics** as well as operating **RF analyzers/signal generators**
- Successfully submitted **1 patent** with another currently in progress

NASA Glenn Research Center (GRC)

Cleveland, OH

QUANTUM COMMUNICATIONS INTERN

Jun 2021 - Aug 2021

- Built **MATLAB models** of electro-optic devices (e.g. phase, intensity, and Mach-Zehnder modulators) that output expected effects of optical frequency comb generation
- MATLAB models were used to measure performance and efficiency of optical quantum entanglement sources for NASA
- Presented results in front of subject matter experts at the **NASA Quantum Information Science Conference**
- Results were used to support NASA's design considerations for space-based quantum communications devices

QUANTUM COMMUNICATIONS INTERN

Jun 2020 - Aug 2020

- Modeled a quantum-optical entanglement source in **MATLAB** to simulate the efficiency of the quantum entanglement process
- Analyzed data to form quantum field-related insights, such as the strength of the polarization and joint spectral correlations
- Successfully presented project results to the quantum team and NASA leadership

Department of Physics at UAH

Huntsville, AL

GRADUATE RESEARCH ASSISTANT

Jan 2019 - May 2020

- Conducted optical and quantum-related research tasks for Dr. Don Gregory's Quantum Entanglement project
- Led numerous presentations** on our research objectives and efforts to undergraduates, graduate students, and the project's stakeholders
- Prepared experiments using **optical lab skills** such as free-space alignment; manipulating optical polarization; beam focusing; generating diffraction patterns with gratings and spatial light modulators, and building various interferometers
- Engaged in scientific outreach** including leading events at two annual North Alabama Regional Science Olympiads at UAH

GRADUATE TEACHING ASSISTANT

Aug 2017 - Dec 2018

- Taught and led 10 university physics laboratory courses** through teaching, student engagement, assigning/grading homework and exams, and holding office hours
- Taught **4** courses in *Physics Laboratory I*, **6** courses in *Physics Laboratory II*, and assisted in **1** lecture course in *Foundations of Physics*
- Learned how to lead class activities and discussions, enhanced skills in real-time **problem solving**, and practiced **compassion** while walking students through conceptual and computational difficulties

Skills

Technical Skills

- Extensive experience in **MATLAB** and **Python** related to **machine learning**, data analysis and visualization
Python libraries: **PyTorch** and **TensorFlow**, **numpy**, **pandas**, **matplotlib**, **sci-kit learn**, etc.
- Experienced in **Latex** scientific typesetting
- Proficient in **Microsoft Word**, **Excel**, **PowerPoint**, and **Project**
- Extensive use of platforms such as **Microsoft Teams**, **Zoom**, **Slack**, and **Skype**
- Coursera certificates:
 - Deep Learning Specialization** - DeepLearning.AI 2021
 - Introduction to Data Science in Python** - University of Michigan 2023
 - Applied Plotting, Charting & Data Representation in Python** - University of Michigan 2023
 - Applied Machine Learning in Python** - University of Michigan 2023
 - Introduction to SQL** - University of Michigan 2023
- **Specialized in optics**, including theoretical nonlinear, Fourier, quantum, and electro-optics
- Experience in laser labs, space hardware testing, and analytical chemistry labs
- Operational experience with **signal generators**, **spectrum** and **vector signal analyzers**, **oscilloscopes**, and **interferometers**

Education

University of Michigan

Ann Arbor, MI

MASTER OF SCIENCE IN **ELECTRICAL AND COMPUTER ENGINEERING**

Dec 2021

- Cumulative GPA of 3.63/4.00
- Specialization in Optics & Photonics

University of Alabama in Huntsville (UAH)

Huntsville, AL

MASTER OF SCIENCE IN **PHYSICS**

Dec 2019

- Cumulative GPA of 3.83/4.00

Adrian College

Adrian, MI

BACHELOR OF SCIENCE IN **PHYSICS AND CHEMISTRY**

May 2017

- Minor in Mathematics
- Cumulative GPA of 3.86/4.00
- Graduated with honors and *summa cum laude*

Additional

Conferences

- Attended quantum-related events at the **2023 SPIE Photonics West Conference** San Francisco, CA
- 2021 Early Career Presenter for the **NASA Quantum Information Science (QIS) Conference** Remote
- Attendee to the 2020 and 2021 **John Glenn Memorial Symposiums** Remote
- Presenter at the 2017 **Ribbons of Excellence Program Conference** at Adrian College Adrian, MI
- Poster presenter at the 2016 **American Geophysical Union Fall Meeting** San Francisco, CA
- Poster presenter at the 2016 **West MI Regional Undergraduate Science Research Conference** Grand Rapids, MI
- Presenter at the **Adrian College Board of Trustees Research Presentations** Adrian, MI

Honors and Awards

- **Eagle Scout** in the Boy Scouts of America 2013
- GDMS **Engineering Excellence Award** 2023
- GDMS Engineering Leadership Program **A-Course Award** 2023
- Frank and Shirley Dick Scholar **Student-Athlete Award** 2015
- Student **Scholar-of-the-Game Award** 2015
- Wacker Silicones **Chemistry Award** 2015