

## Contact

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(LinkedIn)

## Top Skills

Python  
Data Science  
Machine Learning

## Certifications

Importing Data in Python (Part 2)  
Course

Manipulating DataFrames with  
pandas

Python Data Science Toolbox (Part  
2) Course

Importing Data in Python (Part 1)  
Course

Unsupervised Learning in Python

# Matthew Cronin

Cyber Security Data Scientist  
Nashville, Tennessee, United States

## Summary

Data scientist and recovering physicist with 4+ years as an applied Data Scientist working in cybersecurity and marketing analytics, following 8+ years at the cutting edge of MRI research. I define and solve complex business problems and deliver insights and solutions that are clearly described, readily actionable, and trustworthy to stakeholders at all levels.

## # MY APPROACH TO WORK

I am a life-long learner who thrives on solving challenging problems and creating useful tools and insights that deliver value.

I believe that a good team is greater than the sum of its parts, and I strive to always create such partnerships whether as a physicist collaborating closely with doctors at the cutting edge of medical imaging, or now as a data scientist tackling the perennial cybersecurity problem of unknown threats concealed in network traffic.

I believe that carefully identifying the right question and clear communication of a useful solution are equally as important as the problem solving that occurs in between.

## # MY TOOL BELT

My go-to tools as a data scientist are in Python, including scikit-learn, networkx, NumPy, pandas, matplotlib, seaborn etc. I have developed and deployed internal applications in Streamlit, allowing stakeholders to interact with and evaluate model outputs.

I have experience in both AWS and Google cloud environments, and extensive experience manipulating and analyzing data using SQL (Google Bigquery, AWS Redshift). I have 12+ years experience

working in Linux and MacOS environments, using command line tools to manipulate data and interact with remote systems.

I am constantly experimenting with other libraries, visualization tools, and languages, including deep learning libraries like Keras, PyTorch and the fastai2 library.

## # OUTSIDE OF WORK

I am a photographer, occasional banjo player, and lover of cooking, hiking, and spending quality time with friends, family, and my dogs.

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## Experience

Microsoft

Senior Data Scientist

November 2024 - Present (1 year 2 months)

Redmond, Washington, United States

Working on AI/ML initiatives within the Identity and Network Access team.

Founding member of the Entra Conditional Access (CA) policy optimization agent dev team (GA July 2025).

Developed a novel policy embedding model underpinning key CA agent functionality (patent filed).

Carried out modeling and analysis in support of the IDNA Product

Management team developing new, actionable KPIs, and driving additional investment in identified priority areas.

Zscaler

3 years

Senior Data Scientist

April 2024 - November 2024 (8 months)

San Jose, California, United States

Key contributor to the Zscaler Breach Predictor product, from inception to limited release (full release expected H2 2024).

In this role I collaborate closely with security researchers to identify and implement automatable/scalable threat hunting techniques; and with executive and product management stakeholders in the development of product vision and development strategy.

Technologies used include Google BigQuery, DBT, Large Language Models and retrieval-augmented generation (RAG).

**Data Scientist**

December 2021 - April 2024 (2 years 5 months)

San Jose, California, United States

As part of the Z-ML team within ThreatLabZ I leverage network analysis, machine learning, and large language models to identify unknown threats within over 300 Billion (and counting) daily transactions processed by Zscaler.

My primary focus is on collaborating with Zscaler ThreatlabZ security researchers to deliver threat detection at scale, including development of command and control detection and data breach prediction models, and network analysis of malware infrastructure.

**CM Group**

**Data Scientist**

February 2020 - December 2021 (1 year 11 months)

Greater Nashville Area, TN

As a Decision Scientist embedded in the marketing analytics team at CM Group, my core responsibilities are to leverage data science techniques to transform under-utilized data into actionable insights. These insights and tools are used both within marketing and by the executive leadership team to optimize marketing efforts within specific brands and guide strategic decision making across the group as a whole.

**Vanderbilt University Institute of Imaging Science**

**Postdoctoral Research Fellow**

April 2017 - February 2020 (2 years 11 months)

Nashville, TN

At VUIIS I developed advanced MRI acquisition protocols for the probing of functional activity in the brain's white matter, accelerated measurement of quantitative magnetization transfer (qMT) measurements using selective inversion recovery (SIR), imaging of disease pathology in the spinal cord

at using susceptibility-weighted sequences, and the translation of chemical exchange rotation transfer imaging to clinical scanners.

P.I. Professor John Gore, PhD, Dr Daniel Gochberg, PhD

UC Berkeley  
Postdoctoral Scholar (Liu Lab)  
June 2016 - March 2017 (10 months)  
Berkeley, CA

Continuing my research projects established at Duke University, I applied my expertise in quantitative susceptibility mapping (QSM) to investigate novel observations of echo-time dependence in QSM measurements, and contributed to various studies on the changes in QSM measurements due to normal aging and various disease pathologies.

P.I. Dr Chunlei Liu, PhD

Duke University Medical Center  
Postdoctoral Associate (Liu Lab)  
June 2015 - June 2016 (1 year 1 month)  
Raleigh-Durham, North Carolina Area

In this position I applied my expertise in quantitative susceptibility mapping (QSM) to investigate novel observations of echo-time dependence in QSM measurements, and contributed to various studies on the changes in QSM measurements due to normal aging and various disease pathologies.

P.I. Dr Chunlei Liu, PhD

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## Education

University of Nottingham  
Doctor of Philosophy - PhD, Health/Medical Physics · (2011 - 2015)

University of Nottingham  
Bachelor of Science (BSc), Physics with Medical Physics · (2007 - 2011)

St Columba's College, St Albans  
· (2002 - 2007)