

# MICHAEL SEXTON

New York, NY | ms3648@cornell.edu | linkedin.com/in/michaelsexton21/

## PROFESSIONAL EXPERIENCE

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**MadMen AI, AI Engineer and Full Stack Engineer**, Contract - Remote **August 2024-Present**

- **Validated key business assumptions** by analyzing ads from external companies using **flight time** (ad runtime) as a measure of success, leveraging **Python** and open data from Facebook's Ad Library to derive actionable insights.
- Automated marketer workflows by developing new features in React application using **Next.js**, **Prisma**, and **Postgres**, improving efficiency and reducing manual workload.
- Enhanced application performance and reliability by reducing load times by **10x** through **pagination**, **asynchronous processing**, **client-side caching**, and code refactoring, while independently managing deployments and resolving issues.

**IBM, Data Scientist and Software Engineer**, Poughkeepsie, NY **June 2021-July 2023**

- Executed and deployed a Machine Learning pipeline using **SQL**, **Python**, and **Kubeflow** to predict the failure of CPUs in 10,000 Mainframes up to **30 days early**, eliminating downtime costs.
- Designed and maintained custom reporting structures for the z16 and z15 mainframes, supporting the Thermal, Power, and Optical teams in continuous health monitoring of all systems.
- Onboarded, trained, and mentored new Data Scientists.

**Code Ocean, Data Scientist**, New York, NY **June 2020-April 2021**

- Engineered and integrated features using **AWS** and **Docker** to implement large-scale bioinformatics pipelines with parallel execution decreasing processing time by **60%** for Code Ocean's Computational Reproducibility Platform.
- Boosted user retention and acquisition by replicating research papers on the CO platform, enhancing engagement, and expanding the user base.
- Engaged in competitive analysis which informed strategic decisions.

**Paragon Global Markets, Data Analysis Intern**, New York, NY **June 2019-August 2019**

- Developed and implemented a custom financial reporting software using **Python**, **SQL**, and **Tableau** creating actionable insights into the business.

**Layer 7 Consulting, Intern**, New York, NY **June 2018-August 2018**

- Conducted independent site visits for hedge funds, brokerage firms, trading businesses, and law firm clients to perform diagnostics and remediation of critical hardware and software.

## EDUCATION

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**Cornell University**, New York, NY **August 2023-May 2024**

*Master of Engineering, Computer Science*

- Merit Scholarship Recipient | Co-President of the Cybersecurity Club | Cornell Tech Campus | Student Ambassador

*Relevant Coursework:* Machine Learning Engineering • Big Data • Applied Machine Learning • Security and Privacy

**University of Wisconsin-Madison**, College of Engineering, Madison WI **August 2018-May 2022**

*Bachelor of Science, Computer Engineering and Computer Science*

- Artificial Intelligence Club, Data Science Club, Software Development Club

*Relevant Coursework:* Artificial Intelligence • Neural Networks • Database Management Systems • Data Structures

## ACADEMIC PROJECTS

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- Machine Learning Engineering (Cornell): Built a Pytorch replica, implementing Auto differentiation, Tensors, GPU, and Parallel Processing.
- Cornell: Building Startup Systems (Cornell): Developed, built, and deployed a marketplace using a Next.js React frontend, integrated with Firestore for database management and Firebase Authentication for user security.
- Neural Networks (Wisconsin): Tested different data augmentation approaches to classify images of various cities using TensorFlow, Python, and transfer learning of the RESNET model achieving an 80% accuracy rate. **Team Captain**
- Engineering Capstone (Wisconsin): Built the robot BB8 from Star Wars from scratch with a custom-built circuit board and accompanying Bluetooth Android control application in Java using Android Studio. **Team Captain**

## SKILLS

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**Programming Languages:** Python, SQL, Typescript, JavaScript, Java, C++, C

**Packages:** Pandas, Numpy, PyTorch, TensorFlow, Keras, Plotly, Matplotlib, Jupyter

**Databases:** DB2, Firestore, Postgres, MySQL, MongoDB

**Frameworks:** Docker, Spark, Kubeflow, React, Firebase, CUDA

**Areas of Expertise:** Data Science, Software Engineering, Machine Learning, Backend, Frontend

**Citizenship:** US Citizen, Irish Citizen