# **MICHAEL SEXTON**

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**PROFESSIONAL EXPERIENCE**

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

* Executed data analysis to optimize our marketing agency's ad-testing strategy and minimize testing costs using **Python**.
* **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 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**

**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**

* Machine Learning Engineering (Cornell): Built a Pytorch replica, implementing Autodifferentiation, 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**

**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