Matthew Moocarme

Brooklyn – New York

☎ +1 (562) 310 9705 • ✉ moocarme@gmail.com • linkedin.com/in/moocarme

Experience

Paramount Global   **New York, NY**
Principal Machine Learning Engineer   *01/2022–Present*

- Led the design and implementation of a transformer-based foundation model in collaboration with a cross-functional engineering team, enabling scalable recommendations across ranking carousels, end cards, and other product experiences on Paramount+
- Developed a real-time "watch-next" machine learning algorithm for Paramount+ that delivered personalized recommendations post-viewing, boosting 2-minute retention by 18% and 20-minute retention by 16% across 1 million+ users daily.
- Pioneered PlutoTV's initial personalization and recommendation platform, servicing over 5 million daily users with tailored channel, movie, and TV-series recommendations. Enhanced platform capabilities to include sophisticated channel and content similarities that power many personalization products on the service
- Led a dynamic team of machine learning engineers, promoting collaboration and innovation in recommendation algorithms
- Engineered and implemented personalized carousels for returning users, successfully enhancing content discovery rates >15%

ViacomCBS   **New York, NY**
Sr. Director of Data Science   *06/2019–01/2022*

- Led a team of data scientists and contractors to build web-based data products deployed on AWS, perform statistical analyses, and derive data-driven insights to support ad-sales, marketing, and content valuation teams
- Perform comprehensive analyses for our top 200 advertisers that accounted for over $650M in sales to efficiently maximize reach while managing frequency across television, digital platforms, and social media and presented results to C-level executives

Director & Sr. Data Scientist   *02/2017–06/2019*

- Led development of a Dockerized ML product in AWS to predict and monetize social presence, reducing model error by >90%
- Designed and built data pipeline to ingest performance metrics, perform ETL, and store in datalake for over 1500 posts per day from our owned accounts across Facebook, Instagram, Twitter, and YouTube in AWS (Lambda, S3, RDS, Athena)

Matthew Moocarme Consulting Inc.   **New York, NY**
Principal Consultant   *03/2021–Present*

- Aided and advised companies to develop and deploy highly specific machine learning applications within their cloud environments, build out their data science infrastructure, and develop strategies for ongoing model management. Clients range from start-ups to medium-sized organizations spanning different industries.

The Graduate Center of CUNY   **New York, NY**
Graduate Student Researcher   *09/2010–01/2017*

- Developed finite-element method simulations in Python/custom software to design 2D surfaces that efficiently manipulate the polarization of light. Verified experimentally that resulted in 4 first-author publications in high impact journals
- Co-developed and taught "Physics for Computer Scientists II", which built students' understanding of physics using Python

Independent Projects & Outreach

Published Author: Applied Deep Learning with Keras, The Deep Learning with Keras Workshop, The TensorFlow Workshop, *Packt Publishing*
Conference Presentations: PyData (NYC 2018), Keynote at Big Data Innovation Summit (Boston 2017), Keynote at Machine Learning Innovation Summit (NYC 2018), BEITC Featured Presentation at NAB (Las Vegas 2018)
Conference Content Board/Program Committee: Grace Hopper Celebration, SciPy, Data Science Salon

Skills

Languages/Tools: Python, SQL, TensorFlow, PyTorch, Git, Spark, HTML/CSS, Docker, Kubernetes
AWS: S3, EC2, ECS, Lambda, Redshift, Dynamodb, RDS, Athena, Lex, SQS, IAM, Cloudwatch
GCP: Vertex AI, Big Query, Pub/Sub, Cloud Functions, Cloud Storage, Cloudrun

Education

The Graduate Center of CUNY   **New York, NY**
Ph.D. Physics, M. Phil. Physics,   *2017*

Queens College of CUNY   **New York, NY**
M. A. Physics,   *2016*