Dr. Marcus Thompson

Senior Data Scientist & ML Research Engineer

PhD in Machine Learning with 6+ years of experience developing scalable ML systems and conducting cutting-edge research. Published author with expertise in NLP, computer vision, and distributed computing.

CONTACT

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Boston, MA

github.com/marcus-thompson

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Google Scholar

ORCID

CORE SKILLS

MACHINE LEARNING

PyTorch | TensorFlow | Scikit-learn | MLflow

PROGRAMMING

Python | R | SQL | Scala

BIG DATA & CLOUD

Apache Spark | AWS | Kubernetes | Docker

LANGUAGES

English NATIVE

German FLUENT - C1

French INTERMEDIATE - B2

PROFESSIONAL EXPERIENCE

Senior Data Scientist & ML Research Engineer

TECHRESEARCH LABS

2021 - Present Cambridge, MA

Leading machine learning research initiatives and developing production-scale ML systems. Responsible for research strategy, model development, and cross-functional collaboration.

- Developed novel transformer architecture for multilingual NLP, achieving 15% improvement over BERT — PyTorch, Transformers, NLP, Research
- Built end-to-end MLOps pipeline serving 50M+ predictions daily with 99.9% uptime — MLflow, Kubernetes, AWS, Docker
- Led team of 6 researchers in developing computer vision models for medical image analysis — Computer Vision, Medical AI, Team Leadership
- Published 8 papers in top-tier conferences (NeurIPS, ICML, ICLR) with 500+ citations — Research, Publications, Academic Writing
- Optimized distributed training pipeline reducing model training time by 60% — Distributed Computing, GPU Optimization, Performance

Machine Learning Engineer

DATACORP SOLUTIONS

2019 - 2021 Boston, MA

Developed and deployed machine learning models for business applications. Collaborated with product teams to integrate AI capabilities into existing systems.

- Built recommendation system increasing user engagement by 35% and revenue by $2M annually — Collaborative Filtering, Deep Learning, A/B Testing
- Implemented real-time fraud detection system reducing false positives by 40% — Anomaly Detection, Stream Processing, Kafka
- Developed automated feature engineering pipeline processing 1TB+ daily data — Apache Spark, Python, Data Engineering
- Created explainable AI dashboard for model interpretability and compliance — SHAP, LIME, Model Interpretability, Compliance

PROFESSIONAL EXPERIENCE

Research Assistant & PhD Candidate

MIT COMPUTER SCIENCE & AI LAB

2015 - 2019 Cambridge, MA

Conducted research in machine learning and natural language processing under supervision of leading AI researchers. Teaching assistant for graduate-level courses.

- Developed novel attention mechanisms for sequence-to-sequence models — Deep Learning, Attention Mechanisms, NLP
- Published 12 peer-reviewed papers with total citations exceeding 1000 — Research, Academic Writing, Peer Review
- Teaching assistant for Machine Learning and Natural Language Processing courses — Teaching, Curriculum Development, Mentoring
- Collaborated with industry partners on applied research projects — Industry Collaboration, Technology Transfer

COMPLETE TECHNICAL SKILLS

Machine Learning & AI

Deep Learning, Natural Language Processing, Computer Vision, Reinforcement Learning, Generative AI, MLOps, Model Optimization

Data Science Tools

Pandas, NumPy, Jupyter, Apache Airflow, Tableau, Power BI

Big Data Technologies

Apache Spark, Hadoop, Kafka, Elasticsearch, Redis

Cloud Platforms

AWS SageMaker, Google Cloud AI, Azure ML, Databricks

Databases

PostgreSQL, MongoDB, Cassandra, InfluxDB

REFERENCES

Professional references available upon request.