

# Zakery Clarke

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<https://zclarke.dev>

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## Work Experience

### **MyFitnessPal- Manager of Machine Learning & AI (Dec 2024 - Current)**

- ❖ Led AI vision and strategic initiatives, collaborating with product, engineering, and executive stakeholders.
- ❖ Built and managed a team of 8+ ML Engineers, Data Scientists, MLOps Engineers, and AI Engineers deploying ML models and LLM agents serving 200M+ users.
- ❖ Launched Meal Scan Image Recognition, increasing scan-to-log conversion by +26% and trial-to-paid conversion by +8.5%.
- ❖ Directed Search Re-Ranking and Personalization initiatives, boosting search-to-log rate by +5%.
- ❖ Built and scaled the Data Science Ads team, leveraging food database audience segments to enhance advertising targeting and optimize monetization strategies.
- ❖ Developed and deployed a scalable ML Feature Store, centralizing reusable features for training and real-time inference, accelerating development and improving operational efficiency.
- ❖ Managed ML department budget, vendor contracts, AI compliance policies, and infrastructure investments to optimize ROI.

### **Thrive Global- Manager of Data Science (Sep 2023 - Dec 2024)**

- ❖ Built and managed a Data Science team focused on deploying ML models as the core experience of a Behavior Change Platform with 500k+ users, including Fortune 500 clients founded by Arianna Huffington.
- ❖ Managed the development of a Healthcare Large Language Model (LLM) co-founded by the OpenAI Startup Fund.
- ❖ Led the development of advanced ML recommendation models that improved user engagement by 20%, utilizing various Machine Learning techniques in collaboration with Product teams.

### **Health Rhythms- (Team Lead) Staff Machine Learning Engineer (Nov 2021 - Sep 2023)**

- ❖ Trained models to predict and prevent mental illness for at risk patient populations.
- ❖ Created real-time ETL pipelines to process terabytes of raw GPS and EHR data in a HIPPA compliant environment.

### **Dr Owl- Senior Machine Learning Engineer (Mar 2019 - Nov 2021)**

- ❖ Led development of Advertisement platform and built Recommendation Engine.
- ❖ Designed an ID verification service that saved over \$500,000 in expenses by utilizing facial recognition and Machine Learning techniques.
- ❖ Analyzed health statistics on an EHR platform with over 1 million users.

### **E-Center- Machine Learning Engineer (Oct 2018 - Nov 2019)**

- ❖ Analyzed E-Sports player performance through the use of Convolutional Neural Networks, Object Recognition and Machine Learning systems
- ❖ Created business plan and participated in start-up pitches to secure funding

### **E-TransControl- Full-Stack Software Developer (Dec 2016 - Aug 2018)**

- ❖ Created online payment portal to facilitate customer transactions
  - ❖ Embedded Processor Development for transmission controllers in modified vehicles
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## **Education**

### **Master's of Computer Science**

University of New Mexico 2019-2021

- ❖ Focus in Machine Learning & AI
- ❖ Thesis Research in interpretable LLM systems

### **Bachelor's Computer Science**

University of New Mexico 2016-2019

- ❖ Presidential Scholarship & Dean's List
  - ❖ Minor in Mathematics & Statistics
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## **Projects**

### **Teapot AI LLM**

[https://teapotai.com/blogs/teapotllm\\_release](https://teapotai.com/blogs/teapotllm_release)

- ❖ Trained a fine-tuned, ~1B parameter hallucination-resistant LLM, which achieved over 8k monthly downloads on Hugging Face, optimized for reliable RAG-based tasks.
- ❖ Developed chat client that ran in a browser or Chrome extension enabling fast, scalable AI interactions without server infrastructure, preserving user privacy and security.

### **Thesis Project- Interpretable LLMs**

<https://zclarke.dev/thesis.pdf>

- ❖ LLM thesis focused on learning intermediate representations for question answering
- ❖ Uses word vectors, fine-tuned text to text transformers, coreference resolution and other NLP techniques to generate inferred knowledge graphs from a passage of text

### **NYC AI Traffic Camera Analysis**

[https://github.com/zakeryclarke/nyc\\_ai\\_traffic\\_camera\\_analysis](https://github.com/zakeryclarke/nyc_ai_traffic_camera_analysis)

- ❖ Performed large scale analysis of 1000 publicly available traffic cameras using object recognition to identify traffic patterns using parallelized inference
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## **Skills**

Languages: Python, JavaScript, Node JS, Haskell, Java, C++, C, SQL, MongoDB, No-SQL, Object Oriented Programming, Functional Programming

Frameworks & Libraries: TensorFlow, PyTorch, Keras, Scikit-learn, Hugging Face, CatBoost, XGBoost, LightGBM, Pandas, NumPy, Matplotlib/Seaborn, React, LangChain

ML Techniques: Deep Learning, Natural Language Processing (NLP), Neural Networks, Fine-tuning Large Language Models (LLMs) , Retrieval Augmented Generation (RAG), Embedding Models, Vector Databases, Data Visualization

Cloud & MLOps: Databricks, Snowflake, Delta Lake, Apache Airflow, Dagster, CI/CD, GitHub, AWS, GCP (Vertex AI), Azure

Software Development & Tools: Agile/Scrum, Linux, Git, CI/CD, Cursor, VS Code

Leadership & Soft Skills: Team Leadership, Strategic Planning, Cross-Functional Collaboration, Mentoring & Coaching, Communication, Problem Solving, Innovation