

Zakery Clarke

505-234-9665

zakerytclarke@gmail.com

<https://zclarke.dev>

Work Experience

Thrive Global- Head of Data Science & AI (Aug 2024 - Current)

- ❖ Led AI vision and strategic initiatives, collaborating closely with product and executive stakeholders.
- ❖ Managed the development of a foundational Healthcare Large Language Model (LLM) through a subsidiary co-founded by the OpenAI Startup Fund.
- ❖ Managed a team of Machine Learning Engineers, Data Scientists, Analysts, and AI Engineers.

(Team Lead) Staff Machine Learning Engineer (Sep 2023 - Current)

- ❖ Built and led 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.
- ❖ Led the development of advanced ML recommendation models that improved user engagement by 15%, utilizing various Machine Learning techniques in collaboration with Product teams.
- ❖ Developed an LLM agent that was preferred by users over actual coaching experiences, significantly enhancing the platform's user engagement.

Health Rhythms- (Team Lead) Senior Machine Learning Engineer (Nov 2021 - Sep 2023)

- ❖ Trained models to predict and prevent mental illness for at risk patient populations of
- ❖ Created real-time ETL pipelines to process raw GPS and EHR data in a HIPPA compliant environment
- ❖ Led process of productionizing data sources and model development lifecycles

Dr Owl- Machine Learning Scientist (Mar 2019 - Nov 2021)

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

E-Center- Full-Stack & 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 NLP 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

Thesis Project- Interpretable LLMs

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

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

Teapot AI Local LLM Agent

<https://zclarke.dev/portfolio.html#teapot>

- ❖ Built a fine-tuned LLM agent that can perform RAG based chat completely in the browser.
- ❖ Runs completely in a user's browser or chrome extension and can use tools with a ~1 billion parameter model.

NYC AI Traffic Camera Analysis

https://github.com/zakerytclarke/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

NM Apartment Advisors Rent Predictor

https://zclarke.dev/Apartment_Rent_Analysis

- ❖ Created a neural network model with less than 5% error rate to predict rent prices
- ❖ Used ensemble learning techniques to account for sparse sample data

Solomon.ai

<https://github.com/zakerytclarke/solomon>

- ❖ Created tool to automatically clean and visualize data, and build machine learning models
 - ❖ Publicly available under open source license
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Skills

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

Libraries: Pandas, Numpy, Scikit-learn, Keras, Tensorflow, Hugging Face, Spacy NLP, Catboost

Soft Skills: Communication, Self-Starter, Leadership, Teamwork, Problem Solving, Detail Oriented, Quick Learner, Interested in new technologies

Techniques: Machine Learning, Artificial Intelligence, Neural Networks, Natural Language Processing (NLP), Large Language Models (LLM), LangChain, Retrieval Augmented Generation, Image Recognition, Clustering, Data Science, Data Visualization, Continuous Integration/Continuous Deployment (CICD), HIPAA Certification

Technologies: Github, Databricks, Delta Lake, AWS, S3, AWS Cognito, GCP, Vertex AI, Azure, Cloudfront, Elastic Beanstalk, Linux, Unity, Express, React, React - Native, Agile/Scrum, Flutter, Git,