# **Zakery Clarke**

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https://zclarke.dev

### **Work Experience**

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

- Built Data Science team focused on deploying ML models as the core experience of a Behavior Change Platform with 500k+ users and Fortune 500 clients led by Arianna Huffington
- Led development of advanced LLM agent and ML models that improved user engagement using various Machine Learning techniques in collaboration with Product

Health Rhythms- (Team Lead) 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-** Co-Founder & 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

# **Projects**

### Natural Language Processing- Thesis Project <a href="https://zclarke.dev/thesis.pdf">https://zclarke.dev/thesis.pdf</a>

- 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

### 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

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

#### **Computational Paper**

https://zclarke.dev/computationalPaper/

- Drawing app that utilizes machine learning handwriting recognition
- Features mathematical equation solving and automatic graphing

## **Education**

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

University of New Mexico 2019-2021

- ❖ Focus in Machine Learning & Al
- Thesis Research in NLP systems

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

University of New Mexico 2016-2019

- Presidential Scholarship & Dean's List
- Minor in Mathematics & Statistics

### **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), HIPPA Certification
Technologies: Github, Databricks, Delta Lake,
AWS, S3, AWS Cognito, Cloudfront, Elastic
Beanstalk, Linux, Unity, Express, React, React Native, Agile/Scrum, Flutter, Git,