# **Zakery Clarke**

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https://zclarke.dev

### **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

### **Work Experience**

Health Rhythms- Machine Learning Scientist (2021-Current)

- Trained models to predict and prevent mental illness for at risk patients
- Created real-time ETL pipelines to process raw GPS and EHR data
- Led process of productionizing data sources and model development lifecycles

**Dr Owl-** Machine Learning Engineer (2019-2021)

- 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 (2018-2019)

- 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-** Software Developer (2016-2018)

- 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

- Tool that uses AI to determine UX pain points using advanced tracking
- Advanced tracking features including DOM analysis, recording and playback

#### 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

#### **Computational Paper**

https://zclarke.dev/computationalPaper/

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

# <u>Skills</u>

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), 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,