

# CHRISTOPHER UZOKWE

## Contact

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### GitHub

https://github.com/chrisuzokwe

### Website

chrisuzokwe.github.io

## Education

Dec 2021

### M.S. Electrical Engineering

Drexel University

Dec 2021

### B.S. Computer Engineering

Drexel University

## Expertise

### Certifications

Google Cloud Professional Data Engineer

Certified (June 2022)

[CREDENTIALS](#)

### Publications

Structural Segmentation of Musical Audio  
with Region Proposal Networks

[ISMIR 2021](#)

Musical Structure Analysis Using Image  
Segmentation Networks ISMIR 2020

[ISMIR 2020](#)

### Languages

Python, SQL, C/C++, Javascript, HTML

- **Python Modules:** PyTorch, Tensorflow, Keras, Pandas, Numpy, Psycopg, OpenCV, NLTK, Dask, Django

### Technologies

Google Cloud Platform, Amazon Web Services, Git/Github, Docker, Jupyter Notebooks, Kubernetes, PostgreSQL, Linux, CUDA

## WORK EXPERIENCE

Machine Learning Data Engineer

Aug 2022 - Present

### ZeroEyes, Inc. | Conshohocken, PA

- Owned the ZeroEyes database client development creating a CLI for parameterized, asynchronous image retrieval, expediting the ML team's custom dataset creation and streamlining access to a 150,000+ repository of images held in Google Cloud Storage
- Deployed a Facebook AI Similarity Search pipeline on 150,000+ images in ZeroEyes database, introducing novel methods for dataset curation via nearest-neighbor clustering of embeddings features and guiding targeted data collection based on gaps in our database's cluster distribution
- Enriched our annotation datasets with development of a model-assisted labeling pipeline using object predictions from Yolov5 architecture. Introduced 20+ new annotation objects per image.
- Overhauled our internal image processing tool, streamlining image ETL from our data collection team to storage databases. Automated multi-OS builds via GitHub Actions CI/CD, collaborating with the data team for needs-based feature expansion

Data Science Intern

June 2021 - Sept 2021

### Spotify | New York, NY

- Enriched Spotify's label-licensor datasets with an applied natural language processing pipeline, combining disparate graph datasets (musicbrainz, discogs) into a source-of-truth SQL database with 10,000+ entries for cross-functional team use in BigQuery
- Collaborated with Spotify stakeholders, analyzing TBs of playlist data in BigQuery and Tableau for artist growth insights. Presented 3 user stories at 2021 'Demo Days' event

Undergraduate Research Assistant

Oct 2018 - Dec 2021

### Music Entertainment Technology Laboratory | Philadelphia, PA

- Researched and reproduced novel ML and deep learning architectures, focusing on Transformers and CNNs. Stayed current through top conferences (e.g., RecSys, ISMIR) and published relevant findings in my Masters Thesis, ISMIR 2020, and ISMIR 2021.
- Created basic robotics teaching modules with Swift and Arduino for K-12, utilized in 2019 Apple Educators Workshop.

## PROJECTS

### uzplaylists

Personal Project. Designed and developed [uzplaylists.xyz](#), an automated music platform for dynamic playlist management, content generation, and distribution across all major social platforms and music streaming services. Consolidated various APIs into a cloud microservice architecture, supported by a comprehensive CI/CD pipeline using GitHub Actions, Google App Engine, Cloud Run, and Cloud Functions. Streamlined scheduling and management via Notion API and cron jobs.

### MovieLens 100K Recommender System

Built collaborative filtering system to recommend movies based on user-item and user-user matrices. Data sourced online, ingested and analyzed with pandas and numpy using matrix factorization and gradient descent techniques