

Ellington Kirby

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In search of a Machine Learning Research focused internship. Currently enrolled in the IASD Program focused on Machine Learning and AI at PSL Université. Former Software Engineer; workplace experience with machine learning led to a reorientation of my career.

EDUCATION

• PSL University

Masters in Machine Learning - Artificial Intelligence, Systems, Data (IASD)

Paris, France

September 2023 - Current

• Université Paris Dauphine-PSL

Masters in Computer Science and Math - Information, Decisions, Data

Paris, France

September 2022 - May 2023

16.06 GPA

• Binghamton University, State University of New York

Binghamton, NY

Bachelor of Science in Computer Science

2012-2016

RESEARCH EXPERIENCE

Data Driven Trajectory Generation and Extension of Leiden Algorithm for Graph Clustering

June 2023 - September 2023

GRETTIA Lab, Université Gustave Eiffel, Champs-sur-Marne

- Prototyped LSTM based sequence models for Trajectory Prediction
- Conducted literature review on Encoder-Decoder architectures for Trajectory Generation.
- Developed a state of the art algorithm for graph clustering based on the Leiden Algorithm.
- Successfully applied the algorithm to identify areas of road networks which experience similar congestion levels.
- Designed and analyzed experiments showing the proposed algorithm outperformed classical graph clustering methods.

Integration of Structured Knowledge by Specialized Text Synthesis: [link](#)

February 2023

- Research assistant on project to train BERT language models using text generated from Unified Medical Language Systems
- Built pipelines to fine tune and evaluate baseline BERT models on a variety of Biomedical Question Answering Tasks

HearHere: smartphone based audio localization using time difference of arrival: [link](#)

October 2016

- Demo presented at Mobicom 2016
 - Analyzed scholarly work on audio ranging to develop HearHere, an Android Application which implements an advanced audio localization algorithm in a consumer application, turning a surface into a MIDI controller.
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WORK EXPERIENCE

Zenly (Snap Inc.), Software Engineer - Android

Paris, FR

Android Engineer on the Conversations Team

February 2020 - July 2022

- Built and maintained dozens of new features across the Zenly application, including Voice Notes, Video Messages, Emoji Spam, Link Previews, and many other features, used by tens of millions of users daily.
- New features contributed to a 33% increase in daily Zenly chat usage, scaling to millions of messages sent per day.
- Led low level investigations to reduce first frame draw time of chat application by 20% leading to a smoother user experience.
- Evaluated state of the art methods using Deep Learning to explore the problem of automatic lip sync generation
- Implemented a system of Audio feature detection and Formant extraction via Linear Predictive Coding in an attempt to build an automated Lip Sync generation algorithm for Zenly Voice Notes

FanDuel, Android Engineer

New York, NY

Lead Android Engineer at DRAFT, a Fantasy Sports gaming app, later acquired by FanDuel

October 2017 - January 2020

- Lead and solo Android Developer on DRAFT fantasy sports app

Prolific Interactive, Android Engineer

New York, NY

Mobile Agency

October 2016 - October 2017

- Android engineer for multiple projects
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Open Source Contributions:

- [Rinascimento Splendor Framework](#): A framework to train game playing AI on the Splendor board game. Helped with the build system and currently working on new AI strategies.
 - [Python Tweet Preprocessor](#): Tool for removing tweet contents from text. Added utilities for file processing.
 - [LinkedIn LiTr Video Transcoding](#): Extended fragment shader to allow implementation of video shaders. Created Grayscale shader
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SKILLS

Programming Languages: Python, Kotlin, Java, C++, Go, C#

Technologies: PyTorch, Keras, Numpy, Pandas, HF Transformers, Android OS,

Language: English, French (C1)

Personal Interests: Cooking, Guitar, Game Design, Science Fiction and Fantasy literature, exploring France