Conor Carmichael

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EDUCATION

University of Glasgow — Glasgow, Scotland, UK
MSc Data Science — Sep 2019 - Sep 2020

University of Massachusetts Amherst — Amherst, MA
BS Computer Science *GPA: 3.3* — Spe 2015 - May 2019

EXPERIENCE

Fidelity Investments- AI Center of Excellence — Boston, MA
Data Scientist — Jan 2021 - Present

- Fine tuned dense passsage retrieval models for two separate customer facing search applications. This included data augmentation, labelling, evaluating various model hyperparmeter configurations.

- Developed and maintained data pipelines to prepare content for the two search capabilities. The search space was processed into DPR ready index files, and a readable, parseable format to be returned for the application to display. Run as an AWS batch job and stored via python connections to S3 buckets.

- Implemented a unique Multi Armed Bandits approach to personalize content shown to users on mobile leveraging their interaction data. Used all users interaction history to generate prior distributions to initialize behavior for new customers. Designed a Streamlit app to simulate the model's ability to approoixmate a users actual behavior.

University of Massachusetts Amherst — Amherst, MA
Undergraduate Course Assistant: Introduction to Computing — Jan 2019 - May 2019

- Responsible for grading assignments, responding to student questions online, facilitating two labs per week, and running a workshop on topics covered in lectures.

Fidelity Investments — Smithfield, RI
Technical Intern — May 2017, May 2018 - Aug 2017, Aug 2018

2018   Developed web-based views of data which showed the status of applications crucial to access control. Responsible for performing time-efficient calculations to yield the most useful view of the data for each page and designing data-efficient SQL statements for each dataset.

2017   Gathered security standards and developed a proof of concept for a self-service portal designed to reduce cyber security consultations. Developed an eco-friendly, web-based proof of concept for electronic cafeteria receipt delivery, eliminating paper costs.

SKILLS

Programming Languages- Proficient:	Python, Java, JavaScript (jQuery, React)
Data Science Tools:	Pandas, Numpy, PyTorch, Sklearn, Altair, Streamlit, FastAPI
Machine Learning Methods:	Multi Armed Bandits, Dense Passage Retrieval, Image Transformers
Robotics:	Robot Operating System, Gazebo, Navigation

PROJECTS

Spotify Streaming Analysis *Python, Streamlit, Pandas, Spotipy*
A Streamlit app to look back at a users streaming history by time of the year/week/day and generate playlists based on these conditions. Provides insights into listening trends based on the window of streaming history selected.

MSc Research Project *Python, ROS, Gazebo, Visual Simultaneous Localization and Mapping*
Using multi-camera rigging, an all-around look camera was made to leverage equirectangular VSLAM in simulation, for autonomous navigation of a Robotics Operating System enabled robot, in a Linux environment.

AmbeSync *MERN Stack*
A local musician's common platform to share musical projects, ideas, locate collaborators, and seek feedback. Platform includes Scale Visualization (reworked/expanded in React.js) as tool to expand musical comfort zone. AmbeSync is developed with the MERN stack, and includes socket servers for a live chatroom, and redux for state management.