RYAN A. ELLIS

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EDUCATION

JOHNS HOPKINS UNIVERSITY
Master of Science Degree
Major: Artificial Intelligence

UNIVERSITY OF MARYLAND, BALTIMORE COUNTY
Bachelor of Science | Graduated 12/2020
Major: Computer Science
Track: Data Science

TECHNICAL SKILLS

Computer Languages: Python, C++, C#, Java, Matlab, SQL, R
Packages: Seaborn, Keras, TensorFlow, PyTorch, pandas, scikit-learn
Statistics/Machine Learning: Statistical Analysis, Exploratory Data Analysis, NLP, Classification, Linear/Logistic Regression
Frameworks: Django, .Net
Certifications: IBM Data Science Specialization, DeepLearning.AI TensorFlow Developer

PROJECTS

Excel Data Cleaning Ribbon | DCI Consulting | October 2021 - February 2025
- Automates data cleaning and validation process for individual client data for 6 HR Data analysts within DCI Consulting.
- Developed a custom Excel ribbon using XML for user interface and VBA for underlying logic, streamlining data cleaning and reformatting processes.
- Maintained documentation on "how to use" and "known issues" for users. Allowed consultants to easily use ribbon.
- Implemented object-oriented programming (OOP) techniques to enhance code modularity and maintainability. Version control with Github.
- Achieved a minimum 30% reduction in processing time, leading to company-wide adoption by all data analysts in department.
- Transitioned a personal productivity tool into an enterprise solution, demonstrating initiative and cross-departmental impact.

Census Code Classification | DCI Consulting | December 2023 - March 2024
- Developed a proof-of-concept NLP classification solution to classify 2018 Census Occupation codes based on Job Titles and EEO-1 Codes.
- Explored and evaluated three approaches: leveraging pre-trained embeddings with GloVe, one-shot classification via the OpenAI API, and a random forest classifier, each with detailed cost assessments.
- Provided starting point for software team use in in-house software, enabling decision-making regarding most cost-effective solution for classifying 2018 Census Occupation Codes.
- Utilized by all analyst within company helping identify 100s of Census Occupation Codes of jobs per day and decrease time needed by 60%.
- Programmed with Python in a Jupyter Notebook, tensorflow, and uses Glove embeddings. Model monitoring, deployment via Azure.

RAG Blog Chatbot | DCI Consulting | October 2023 - October 2023
- Designed proof-of-concept project for marketing team, showcasing deployment and cost benefits of chatbot integration for company blog. Estimated to reduce research and writing time for blogs by 20% at a minimum.
- Utilized OpenAI API, Chroma DB vector database, Langchain for retrieval augmented generation capabilities. Allowing for a relevant score of 80% on average. Implemented with Python in a Jupyter Notebook.
- Explored Hugging Face open source solutions, assessing potential integration for enhanced flexibility.

PROFESSIONAL EXPERIENCE

Hr Data Analyst | DCI Consulting | October 2021 - February 2025

- Clean and transform client data into preferred data schema format for up to 20 clients at a time. Working in a small team.
- Processed data with over 200,000 rows. to run statistical analysis for the Equal Employment Opportunity Affirmative Action Plan to report and elaborate findings to consultants.
- Construct and maintain VBA macros for automation of data cleaning and formatting, leading to 25% decrease in time needed for manual data manipulation efforts.
- Entered data into 3 custom programs with use of a SQL server.
- Monitor and deploy custom machine learning model for team of 6.