Blake Martin

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EDUCATION

Brescia University   Owensboro, KY
Bachelor of Science in Computer Science   *Aug. 2020 – Dec 2023*

EXPERIENCE

Software Engineer   Feb. 2022 – Present
Nova Incorporated   *Palo Alto, CA*
- Engineered an XGBoost-based sales forecasting model in Python using PySpark, utilizing a fine-tuned GPT-3.5-turbo model for feature engineering to forecast sales 3 months ahead, increasing quarterly sales by 22%
- Deployed the aforementioned model to production using AWS Sagemaker, establishing a CI/CD pipeline for continuous testing using CodePipeline and GitLab
- Streamlined hiring by performing an EDA with spaCy and scikit-learn on instructor resumes to refine selection criteria, saving 10-hours per week hiring manager by reducing number of interviews by 55%
- Developed a FastAPI incorporating GPT-4 for automated analysis of video interviews from applicants, triggered via webhook upon submission, automating a manual review process previously taking hours

Machine Learning Intern   Aug. 2022 – Nov. 2022
Nova Incorporated   *Palo Alto, CA*
- Guided a group of five underprivileged high schoolers in building a LangChain agent to generate personalized feedback on scholarship essays, assisting over 50 high school seniors in attaining attain over $500K in scholarships
- Orchestrated an AirFlow DAG to scrape hundreds of award-winning scholarship application essays from websites like PrepScholar weekly, aggregating over 2000 essays stored in a Snowflake table
- Fine-tuned a GPT2LMHeadModel on scraped essays to generate proposed rewrites incorporating personalized feedback, deploying through a Gradio interface on HuggingFace

Machine Learning Research Assistant   Mar. 2021 – Apr. 2022
Brescia University   *Owensboro, KY*
- Designed an experiment to optimize agent performance in iOS games using Python, analyzing the impact of reward system design on an autonomous reinforcement learning agent trained for gameplay
- Developed and executed an experimental setup with PyTorch and NEAT, enabling training and data collection on 150 concurrently running RL models in under an hour
- Presented research at the National Conference on Undergraduate Research

PROJECTS

EchoSearch | *Python, Pinecone, S3, Streamlit, Heroku*   Apr. 2024 – May 2024
- Developed an image recognition system to assist a charity in managing photos of missing children, using a Python-based facial recognition library to generate face encodings
- Implemented image analysis to match or index photos in Pinecone database based on face encodings
- Configured the system to store raw images in an AWS S3 bucket
- Built a user interface with Streamlit and deployed it on Heroku

LLMs: Beyond the Code | *Figma, WebFlow, Google Analytics*   Oct. 2023 – Present
- Launched an award-winning LinkedIn newsletter on cutting-edge NLP engineering and large language models like GPT, Llama, and Gemini, publishing over 35 article editions and garnering 2300 subscribers in 7 months
- Developed a paid version of the newsletter, converting 15% of free subscribers to paying customers
- Created a newsletter landing page with Figma and WebFlow, attracting over 10,000 site visitors monthly
- Earned the "Top Data Science Voice" Community Badge on LinkedIn

TECHNICAL SKILLS

Languages: Python, SQL, Go, Java, Scala, JavaScript, TypeScript
Frameworks: React, React Native, FastAPI
Developer Tools: Azure, AWS, Spark, Hadoop, dbt, Databricks, Snowflake, Airflow, Docker, Kubernetes, Postman
Libraries: scikit-learn, ResNet, YOLO, OpenCV, GPT, LLaMA, BERT, TensorFlow, Keras, Pandas