GARRETT COX

Cross Roads, TX · +1-940-441-3949 · gcoxstudio@gmail.com
https://linkedin.com/in/gcoxstudio/
https://gcoxstudio.com

Senior ML Engineer with over 10 years of experience in all aspects of ML development lifecycle using PyTorch, TensorFlow, Scikit-learn and cloud technologies. Coordinated with 4+ cross-functional teams to meet business requirements and customer needs. Excel at identifying and solving complex technical challenges and demonstrate a dedication to staying up to date with latest technologies and industry trends. Delivered 10+ AI projects across Financial, Grocery retail and Transportation sectors.

SKILLS & OTHER

- NLP, Generative AI, Data Analysis
- Python, R, C++, SQL
- PyTorch, TensorFlow, Keras, Scikit-learn
- MS SQL, MySQL, CosmosDB, DynamoDB, PostgreSQL, Blob Storage
- AWS, GCP, Azure
- AWS Sage Maker, Terraform, Kubernets, Docker, MLOps
- RAG, ETL, Data Warehouse

PROFESSIONAL EXPERIENCE

Merrill Lynch Wealth Management, New York, NY   May 2018 – May 2024
Senior ML Engineer

- Led the development of AI chatbot using **PyTorch**, **LangChain**, and **Rasa** to provide real-time financial advice and account management assistance; reduced customer churn by 20% by ensuring 24/7 service availability and instant query resolution.
- Developed machine learning models utilizing **Transformers**, **LLMs** to analyze market trends and predict client investment behaviors; resulted in a 30% revenue growth by enabling advisors to provide timely and informed recommendations.
- Designed a clustering algorithm using **PyTorch**, **Pandas** to segment clients based on demographics, investment preferences, and behaviors, enabling more personalized communication and service.
- Created a **Monte Carlo Simulation**-based risk assessment model that processed 1,000+ investment scenarios, equipping advisors with the necessary insights to optimize client portfolio strategies and improve risk management.
- Optimized Compliance Monitoring models to oversee transactions for regulatory compliance and detect potential fraudulent activities by implementing **RAG**, resulting in a 20% improvement in fraud detection accuracy.
- Architected a scalable machine learning infrastructure on AWS leveraging **SageMaker**, **Kubernetes**, **Glue** and **MLOps**, resulting in deployment efficiency and model performance.
- Determined the optimal number of pods in **Kubernets** by monitoring the system performance with Amazon CloudWatch, improved the overall system efficiency by 15%.
- Mentored 3 junior engineers in advanced model development and efficient version control practices, boosting team productivity by 25%.

HEB, San Antonio, TX   Oct 2014 – May 2018
Senior ML Engineer

- Engineered HEB Chatbot using **Tensorflow**, **NLTK** and **Spacy** to deliver personalized food recommendations based on real-time sentiment analysis, enhancing customer engagement and satisfaction by 30%.
- Implemented a machine learning model using **TensorFlow** and **XGBoost** to analyze customer movement patterns; enhanced retail layout strategies, leading to an impressive 10% revenue growth within six months of implementation.
- Designed a comprehensive pricing algorithm to recommend optimal pricing strategies based on analytics of historical sales data and market trends.
- Created an end-to-end machine learning pipeline on **GCP** with integrated tools such as **Apache Kafka** and **MLflow**; empowered analytics teams to derive insights from 500,000+ data entries seamlessly, transforming data-driven decision-making.
- Spearheaded integration testing for machine learning models using **PyTest**, implementing automated test cases to ensure seamless interoperability within production environments, resulting in a 40% reduction in production errors within three months.
- Collaborated with 3+ cross-functional teams, including data scientists, software engineers, and product managers to drive innovative solutions and ensure alignment on project goals and deliverables.

Technical Transportation, Southlake, TX   Jul 2013 – Oct 2014
ML Engineer
- Engineered a real-time traffic analysis application utilizing **Google Maps API** and machine learning algorithms; enhanced navigation efficiency, leading to reduced travel times by 25% for 5,000 daily users.
- Built a driver behavior classification model using **scikit-learn** and **XGBoost** to classify driver behavior based on speed, braking patterns, acceleration, and fuel consumption, enhancing safety measures and optimize fuel efficiency by 20%.
- Developed real-time routing model that adjust based on current traffic conditions, accidents and road closures with **Tensorflow**, enhancing transport efficiency be 15%.
- Deployed **GIT** for version control, automated build processes with **Jenkins**, and integrated **JIRA** for commit monitoring.

EDUCATION

Georgia Institute of Technology, Atlanta, GA   Dec 2022
Master of Computer Science

The University of Texas at Dallas, Dallas, TX   May 2013
Bachelor of Computer Science