Brandon Amarasingam

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AI ENGINEER

Full-stack AI engineer with expertise in generative AI, machine learning, and data science. Proven experience in developing production-ready AI applications. Seeking to leverage advanced skills in Python, NLP, and cross-functional collaboration to drive cutting-edge AI solutions and business value.

TECHNICAL & INTERPERSONAL SKILLS

Languages and Libraries: Python, Scala, Scikit-Learn, NLTK, PyTorch, TensorFlow, Keras, PyMC, BeautifulSoup, Pandas, Java, C++, SQL, R, SAS, MATLAB, Excel, Tableau, LaTeX, Matplotlib, Seaborn
Tools: Version Control (Git), Distributed (Spark) & Cloud Computing (AWS, Azure), MS Office
Interpersonal skills: Problem solving, Organization, Time Management, Communication, Collaboration

PROJECTS

BEV Growth Within WA | [GitHub](#) | Python | Streamlit
- Engineered a Streamlit application for visualizing growth projections of BEVs in Washington State
- Applied ARIMA and VARMA predictive modeling to forecast BEV expansion trends, leveraging public datasets from the US government site for robust analysis and predictions

Detect AI vs Human Text | [GitHub](#) | Python
- Engineered a precision-tuned classification model using NLP techniques to accurately classify human vs. AI-generated text, leveraging ChatGPT and Reddit APIs for robust dataset creation
- Applied cutting-edge analysis and feature extraction methods to optimize model precision and performance for the classification task

EXPERIENCE

Johnson Electric, AI Engineer   *Toronto, ON 12/2024 - Present*
- Architected and built a full-stack LLM pipeline leveraging a RAG architecture with a FAISS vector database for automated document analysis, significantly accelerating the delivery of requirements
- Led the creation of a live monitoring tool for Computational Fluid Dynamics simulations, implementing data streaming, feature extraction, and anomaly detection on solver outputs to proactively minimize HPC downtime
- Spearheaded the design of a data pipeline and analytical framework to extract market insights and trends on pricing and global movement from competitor shipping data for key stakeholder reporting

Iter Innovandi, Data Scientist   *Montreal, QC 06/2024 - 11/2024*
- Engineered an AI voice agent with real-time transcription, LLM integration, and TTS for precise input, context-aware responses, and natural speech, optimized for performance and low latency
- Optimized AI voice agent performance through comprehensive data analysis, model design, training, and fine-tuning, including voice data collection and preprocessing

Laughpad, ML Engineer/Technical Advisor   *Toronto, ON 09/2023 - 10/2024*
- Implemented a laughter recognition model with PyTorch using three open-source datasets, and successfully deployed it on Azure, ensuring scalability and robust performance
- Tailored, trained and fine-tuned models for diverse scenarios; optimized ResNet with Data Augmentation for improved performance in noisy environments

EDUCATION & ACCREDITATIONS

ARTiBA, Artificial Intelligence Engineer (AiE)   *Remote/Online, Earned: 07/2025*
General Assembly, Data Science Immersive   *NY City, NY, Earned: 11/2023*
- Techniques: Transfer Learning, Natural Language Processing, Computer Vision, Reinforcement Learning, Bayesian Inference, Time Series Analysis, Unsupervised Clustering Algorithms, A/B Testing, Various Regression and Classification ML Algorithms, Deep Learning Techniques

Carleton University, Bachelor of Mathematics, Statistics   *Ottawa, ON, Earned: 09/2020*