Joshua Chen

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Education

UC San Diego San Diego, CA

Masters of Science in Business Analytics *Aug. 2023 – Dec. 2024*

- Strong focus on Machine Learning
- Beta Gamma Sigma, GPA: 4.0

UC San Diego San Diego, CA

Bachelors of Science in Cognitive Science, Specialization in Machine Learning *Sep. 2021 – June 2023*

- Magna Cum Laude, GPA: 3.966, Major GPA: 4.0

Experience

Software Developer Mar. 2025 – Present

IBM - MCSP Common Service Broker *Austin, TX*

- Developed and maintained backend services supporting IBM's MultiCloud SaaS Platform (MCSP)
- Responded to dev-support queries from product teams, providing rapid resolutions and technical guidance
- Created a centralized runbook documenting known errors, significantly reducing issue diagnosis times
- Built a cross-cloud automation script to modify IAM/RBAC policies on IBM Cloud, Azure Key Vault, and AWS Secrets Manager, securely sharing secrets with product teams
- Managed CSB deployments via GitOps workflow using ArgoCD and Kubernetes, ensuring consistent releases
- Automated the generation of Helm YAML files to streamline environment-specific deployment configurations

Data Science Intern March. 2024 - June 2024

AlphaTrAI *San Diego, CA*

- Led a team of four, delegated tasks, and managed the project development lifecycle
- Engineered a comprehensive data acquisition pipeline, integrating APIs and web scraping techniques to aggregate data from varied sources and enhancing data diversity by 50%
- Conducted extensive research to enhance data processing techniques and feature generation, developing a streamlined pipeline that improved model performance by 25%
- Implemented machine learning algorithms, including regression and classification models, and evaluated results using A/B testing
- Authored professional analysis reports, delivering actionable insights to clients

Projects

Fraud Detection for Credit Card Transaction Mar. 2024 – Jun. 2024

- Designed machine learning models to detect fraudulent transactions, improving fraud detection accuracy by 20%
- Applied advanced feature engineering, including velocity-based metrics and temporal patterns
- Documented results and created visual reports with actionable recommendations to stakeholders

Domain Adaptation in Financial NLP Sep. 2024 – Dec. 2024

- Fine-tuned FinBERT on Financial PhraseBank, achieving 86.2% accuracy
- Tested zero-/few-shot learning with LLaMA 2 and GPT-4o, achieving 84.5% accuracy without fine-tuning
- Used data augmentation to handle class imbalance and improve model generalization
- Proposed hybrid methods combining fine-tuning and prompt-based learning for future work

Technical Skills

Languages: Python, SQL (PostgreSQL, T-SQL, MySQL), Java, R, JavaScript, Go, Bash
Frameworks/Tools: Node.js, Docker, Git, Kubernetes, ArgoCD, Helm, Terraform
Libraries: Pandas, NumPy, PyTorch, TensorFlow, Transformers, Selenium, BeautifulSoup, FinBERT
Concepts: DevOps, CI/CD, Microservices, REST APIs, IAM/RBAC, A/B Testing, ML Models, Data Visualization