

JADEN FIX

jadenfix20@gmail.com | +1-(916)-450-1541 | GitHub.com/jadenfix | LinkedIn.com/in/jadenfix/

EDUCATION

CALIFORNIA POLYTECHNIC UNIVERSITY

Master of Science: Quantitative Economics

San Luis Obispo, CA

August 2024 - June 2025

Coursework: Software Development for Economics, AI and Machine Learning, Machine Learning for Prediction and Causal Inference, Dynamic Stochastic Modeling, Advanced Econometrics I, II, & III (Microeconometrics), Microeconomic Analysis, Evidence-Based Decision Analysis (Bayesian)

DATAEXPERT.IO

Bootcamp: Data Engineering

Remote

December 2024 - January 2025

CALIFORNIA STATE UNIVERSITY

Bachelor of Arts: Economics

Sacramento, CA

August 2022 - May 2024

Achievements: Adam Smith Award (Top Undergraduate Research Thesis), Men's Water Polo, GPA: **3.7**

WORK EXPERIENCE

WORLD BANK GROUP

Data Science Consultant (Co-op)

San Luis Obispo, CA

January 2025 - June 2025

- Engineered **real-time ML pipelines** using **PyTorch**, **TensorFlow Extended (TFX)**, and **AWS SageMaker** to process **10M+ daily economic data points**, reducing inference latency by **30%** via parallelized Spark clusters.
- Optimized **Prophet/ARIMA time-series models** with **Bayesian hyperparameter tuning (Optuna)** and **cross-validation**, achieving **95% precision** in identifying macroeconomic risk factors for policy prioritization.
- Productionized **containerized ML microservices** (Docker/Kubernetes) with **RESTful APIs**, slashing endpoint response times by **40%** and enabling real-time visualization in **Tableau/Plotly Dash** dashboards.
- Architected **Spark Structured Streaming ETL workflows** (Airflow) for **1TB+ datasets**, enforcing GDPR compliance via **AWS S3 server-side encryption** and **IAM role-based access**.

AT&T

Associate Solutions Manager

Sacramento, CA

May 2023 - August 2024

- Leveraged **SQL/Python** to automate CRM data analysis, identifying high-value clients and driving a **23% increase in close rate** and **17% growth in deal size**.
- Designed **data-driven sales pipelines** (Salesforce, Tableau) that improved lead scoring accuracy by **28%** using logistic regression-based prioritization.

PALISADES TAHOE

Systems Engineer

Lake Tahoe, CA

October 2021 - April 2023

- Developed **IoT sensor data pipelines (Python, SQL)** for **200+ snow-making machines**, reducing data processing latency by **70%** via distributed Dask workflows.
- Trained **gradient-boosted regression models** (XGBoost) to optimize water/energy usage, cutting environmental impact by **10%** and costs by **12%**.

PROJECTS

Statistical Language Modeling with N-Gram Architectures | Python, NLP

February 2025

- Engineered **Unigram/Bigram/Trigram** models with **Add-k** and interpolation smoothing in **Python**, reducing test perplexity by **56%** through hyperparameter tuning and **<UNK> tokenization** for sparse data handling.

Algorithmic Trading System for Cryptocurrencies | Python, Backtesting, FastAPI

January 2025

- Developed RSI/volume-based trading strategies using **backtesting.py** and **pandas**, achieving **18% reduced max drawdown** through parameter optimization and Solana blockchain data integration.

Bayesian Markov-Switching Model for Volatility Regime Forecasting | R, Econometrics

May 2024

- Engineered a **Bayesian Markov-switching model** with **econometric forecasting** to identify latent volatility regimes, leveraging **50+ years of data** and macroeconomic features to achieve **85%+ directional accuracy** in regime prediction.

SKILLS

Languages: Python, R, STATA, SQL (MySQL, PostgreSQL, SQL Server, Oracle, BigQuery), NoSQL (MongoDB, DynamoDB, Cassandra), Julia, Scala, Java, C++, Bash, MATLAB, VBA

Machine Learning & AI: TensorFlow, PyTorch, Scikit-Learn, XGBoost, LightGBM, MLflow, Hugging Face, OpenCV, NLTK, spaCy

Big Data & Cloud: Apache Spark, Hadoop, Airflow, Databricks, Snowflake, Redshift, BigQuery, GCP, AWS (S3, Lambda, SageMaker), Azure (ML Studio, Synapse)

MLOps & DevOps: Docker, Kubernetes, Terraform, CI/CD (GitHub Actions, Jenkins, GitLab CI), Weights & Biases, DVC, Argo Workflows

APIs & Backend: Flask, FastAPI, Django, REST, GraphQL, OpenAPI, OAuth

Databases & Storage: PostgreSQL, MySQL, SQLite, MongoDB, Redis, Firebase, Parquet, Delta Lake

Visualization & BI: Tableau, Power BI, Looker, Matplotlib, Seaborn, Plotly

Developer Tools: Git, GitHub, GitLab, JIRA, VS Code, Postman