Jason F. Petri

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Education

- **University of Texas** — Austin, TX
  Master of Science in Business Analytics — *May 2021*
- **University of Akron** — Akron, OH
  Bachelor of Business Administration in Financial Management — *May 2020*

Experience

- **KeyBanc Capital Markets** — Cleveland, OH
  Quantitative Analyst — *2021 - Present*
  - **Vendor Management**: Consulted with vendors to gather firewall, connectivity, public/private key details from OneTick, Refinitiv, Bloomberg, and MarketAxess to enable connectivity between internal cloud environments and vendor APIs, FIX engines, and data products.
  - **Unstructured Data**: Ideated usage of internal, terabyte-scale consumer transaction dataset to track over 1100 unique companies. Utilized BigQuery and automation to build weekly sell-side research products sent to investment community.
  - **Trading Infrastructure**: Architected and wrote Java application to interface with MarketAxess FIX engine to send algorithmically-generated spread to benchmark levels for investment grade bonds.
  - **Cloud Migration**: Gathered requirements from internal team, designed, and implemented a cloud-native solution to promote usability and cost savings. Collaborated with internal technology teams to abide by security model for publicly available endpoints and data loss prevention initiatives.
  - **Pricing Engine**: Built a Flask API with Refinitiv bond fundamental data and QuantLib to support the pricing and calculation of duration, net present value, and yield-to-worst measures for investment grade corporate bonds.
  - **Generative Modeling**: Trained a generative adversarial network (GAN) with TensorFlow to simulate equity order flow data. Used synthetic data to backtest market impact models.
  - **Volatility Modeling**: Implemented equity volatility models and produced an automated Airflow job to store volatility estimations for our tradable universe. Used volatility models and Monte-Carlo simulations to estimate probability of limit order fills.
  - **Trading Application**: Built React, AgGrid, and Redis trading application for fixed income traders to receive and act on real-time analytics. Application supports thousands of updates per second, user customization, and authentication.
  - **Spread Modeling**: Generated model features in BigQuery from various sources with window functions to detrend and predict g-spread dynamics using Random Forest models. Deployed models for usage in real-time trading and analytics.
- **Las Aguilas Investments** — San Antonio, TX
  Analyst — *2019*
  - **Portfolio Management**: Analyzed fixed income and equity holdings using Bloomberg functions to create written reports on exposures, risks, performance, and style drift.

Projects

- **Portfolio Management Web Application**: Portfolio visualization tool to monitor live performance of University of Akron's student managed fund.

Technical Skills

- **Languages**: Python, Javascript, Java, SQL
- **Technologies**: BigQuery, Linux, Docker, git, React, Kafka, Redis, Flask