

Data Science, Analytics, and Engineering Experience

- **PepsiCo ROI - Engineering Manager (Jan 2025 - Present):** Team of 11 engineers is responsible for creating and maintaining a platform to support data ingestion, mapping, validation, and reporting for 24 markets, including the US. Support also includes platform documentation and training for ops teams utilizing the platform in global markets. In US, team supports all functions on quarterly cadence. During period, we've reduced our time-to-reporting by 25%, while increasing the number of data vendors supported by 10% and markets supported by 20%, and made efficiency gains in our main delivery pipeline to cut runtime by 85%.
- **PepsiCo ROI - Data Engineer (Feb 2021 - Dec 2024):** Generally responsible for building, maintaining, and operating media pipelines and coordinating raw quarterly deliveries from media partners at Facebook/IG and Google/YouTube. Owned procurement/processing of external data for new market modeling. Introduced testing concepts that helped the team increase coverage by 58%, and DBT practices allowing us to consolidate our reporting pipelines in a much more transparent manner.
 - **Saturation Curves:** Led transition from ad-hoc request fulfillment via notebook to configurable pipeline with alignment and validation processes, interfacing directly with our platform and business teams. Additionally, worked with EU business to extend support and tune the models to their specific needs.
 - **Automation:** Led implementation effort to automate ingestion of vendor data, including API integrations and event-driven triggering, ultimately automating 43% of pipelines.
- **Blue Bottle - Software Engineer (Jul 2017 - Jan 2021):** Initially, end-to-end implementation of demand forecasting, including data engineering, experimentation, optimization, monitoring, and delivery. Eventually sole data and analytics engineer reporting regularly to leadership.
 - **Retail Bean and Culinary Forecasting:**
 - V1 Built a framework in Python to productionize training predictive ensemble SARIMAX models, generating demand forecasts for each of our food items, and a delivery/management system. Much of my work on this project was focused on improving reliability and performance, completely automating model training of forecast models, reducing lead-time for forecasting for new locations, expanding the number of forecastable items, and expanding test coverage of the codebase.
 - V2 Led a team of consulting ML engineers, providing business/process insight, building the necessary data pipelines, performance and SLA monitoring, an ensemble step, and dev ops. We rebuilt the original model and infrastructure to employ an LSTM RNN and data external to each individual sales series.
 - **Analytics and BI:** Rebuilt our BI infrastructure to utilize DBT, Fivetran (in addition to our own custom integrations), and Sigma. Rebuilt our subscription eventing logic, and implemented customer LTV models tying together app and eComm users supporting subscriptions, merch, retail coffee, and cafe sales. Supported leadership, business, and marketing teams with reporting queries and dashboards.
- **QuasiCoherent Labs - Co-Founder (2015 - 2019):** Worked with largely non-profit clients to design and spec projects to their needs. Most recently, we provided research and graphics for the book *When it Finally Happens* (2019) by Mike Pearl.

Post-Secondary Education

- **PhD:** Kansas State University, Mathematics (December 9, 2016)
- **Professional Training:** The Data Incubator, Data Science (November 11, 2016)