

# Michael Beauchamp

LinkedIn: mlbeauchamp  
Email: michael@leanbuild.ai  
GitHub: github.com/mlbeau  
Website:

<https://leanbuild.ai/>

## SUMMARY

Founder and systems architect building correctness-first financial infrastructure for regulated operational environments.

Background spans data architecture, quantitative risk modeling, and large-scale enterprise systems where statutory requirements, operational execution, and financial risk must remain aligned under real-world conditions.

Currently building LeanBuild™, a compliance correctness layer for construction payments that validates, explains, and documents payment-stage compliance before funds are released.

Selected roles prior to founding LeanBuild.

## EXPERIENCE

### Carrier Corporation

Senior Analyst, Supply Chain Intelligence

Indianapolis, IN

Dec 2011 – 2025

Built and operated analytics and data infrastructure inside a Fortune 500 supply chain environment, supporting real-time operational and financial decision-making under regulatory and performance constraints.

- Led the design, development, and implementation of 25+ SAP BOBJ Web Intelligence reports and interactive dashboards, providing real-time insights into supply chain KPIs and enabling data-driven decision-making.
- Built SQL stored procedures and ETL pipelines to integrate and prepare data for SAP and BOBJ platform implementations.
- Designed and deployed predictive and analytical models to support demand planning decisions in a high-volume supply chain, with emphasis on data integrity, explainability, and operational trust.
- Applied data mining and predictive modeling techniques to identify demand patterns, resulting in a 10% improvement in demand forecasting accuracy and optimized inventory management.
- Played a pivotal role in improving SAS data models and data warehouse administration, ensuring data integrity, and enabling 33% faster query performance.

### UnitedHealth Group – Optum

Data Engineer, Healthcare Analytics

Franklin, TN

May 2011 - Dec 2011

- Engineered an automated ETL pipeline to integrate Medicaid member data into on-premises databases enhancing data quality and accessibility.
- Built data architecture and Python ETL processes for loading healthcare claims data into databases.
- Implemented data quality checks and validation processes to ensure accuracy and reliability.
- Provided data engineering support for machine learning initiatives related to claims analysis.
- Communicated data insights to cross-functional teams to drive enhancements.

### MRC Global

Data Engineer, Supply Chain Analytics

Tulsa, OK

May 2008 - Sep 2009

- Developed dynamic web applications using HTML, JavaScript, ColdFusion using SQL against Oracle back-end database.
- Performed statistical analysis in R to monitor data quality, identify anomalies, and recommend process improvements, improving data accuracy by 20%.
- Built end-to-end machine learning models in Python to predict inventory needs, enabling superior demand planning.

### The Rowland Group

Data Engineer, Pricing Analytics

Tulsa, OK

Nov 2007 - May 2008

- Built machine learning models in Python to forecast product demand, improving sales projections by 10%.

- Designed MySQL database schema to allow for scalable storage and faster querying of large pricing datasets.

**DataCom, Inc.**

Software Engineer

Broken Arrow, OK  
Nov 2006 - Nov 2007

- Built Microsoft SSRS reporting dashboard to uncover customer, product, and sales insights for executives.
- Designed contract and revenue web pages using ASP.NET and C#.

**Northeastern State University**

Data Analyst, Enrollment Analytics

Tahlequah, OK  
May 2001 - Nov 2006

- Built logistic regression models in Python to identify factors influencing student enrollment, improving admissions forecasting by 30%.
- Designed MySQL database schema and ETL pipelines to integrate student data from multiple systems into a single database.
- Performed cohort analysis in R to track graduation rates across student demographics and guide retention initiatives.
- Implemented statistical models to predict students at risk of dropping out.
- Developed Excel visualizations to provide enrollment insights and trends to university leadership.

## TECHNICAL & SYSTEMS EXPERTISE

---

### Correctness-First System Design

Designing systems that surface and validate statutory, financial, and operational constraints **without displacing existing workflows, judgment, or authority**.

### Compliance-Aware Data Architecture

Audit-ready data models and validation pipelines that preserve evidence, context, and traceability across regulated operational workflows.

### Deterministic Validation & Explainable Analytics

Rule-based validation and analytical logic (Python, R) designed for explainability, confidence bounds, and operator trust – not opaque automation.

### API-First Integration Architecture

Designing modular, API-driven services that integrate with accounting systems, workflow platforms, and financial infrastructure **without embedding business logic inside partner systems**.

### Operational & Payment-Stage Risk Visibility

Analytics that provide early visibility into execution-stage issues and degradation patterns, supporting monitoring and coordination rather than enforcement.

### Applied Statistical Modeling in Production Systems

Regression, GLM, and forecasting models deployed in enterprise environments with emphasis on reliability, interpretability, and operational adoption.

**Tools & Platforms:** Python, SQL, R, PostgreSQL, MySQL, SAP BOBJ, SAS

## EDUCATION

---

### • MIT Professional Education

Certificate: Applied Data Science

Boston, MA  
July 2023

### • Northwestern University

M.S. in Predictive Analytics

Evanston, IL  
March 2016

• **Northeastern State University**  
B.S. in Mathematics

Tahlequah, OK  
December 2011