

Weizhi Wang

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EDUCATION

Santa Clara University | Santa Clara, CA
M.S. in Business Analytics | GPA: 3.7/4.0

Sep 2024 - Dec 2025

Pennsylvania State University | State College, PA
B.S. in Economics

Aug 2019 - May 2024

TECHNICAL SKILLS

Programming & Data Analysis: Python (pandas, numpy, scikit-learn), R, SQL, Excel

Statistical & Analytical Methods: Regression, Classification, Clustering, Hypothesis Testing, A/B Testing, Time Series

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

Database & Workflow Tools: MySQL, PostgreSQL, BigQuery

RELEVANT EXPERIENCE

AitherPath

Jersey City, NJ

Data Analyst Intern

Jul 2025 - Sep 2025

- Built a **scalable ETL pipeline** to process over **20M+** loan-level monthly data, standardizing **delinquency and status codes**, creating a clean **modeling-ready dataset** that supported accurate monthly **prepayment rate forecasting** for **mortgage-backed securities**.
- Developed a **predictive model** to estimate next-month loan **state transitions** (Current, 30, 60, 90+ days delinquent, Prepaid, or Cured), generating a monthly **transition-probability matrix** that enabled portfolio managers to monitor cohort roll-rates and anticipate cash-flow patterns, improving forecast accuracy by **10-15%** versus a **logistic baseline**.
- Designed **interactive dashboards** in **Tableau** to visualize monthly **prepayment forecasts**, **delinquency trends**, and **scenario analyses**, allowing stakeholders to quickly identify **risk exposures**, evaluate alternative strategies, and make **data-driven decisions** for mortgage portfolio management.
- Delivered **actionable insights** from prepayment and delinquency analysis, supporting **scenario planning** for **2024-2025**, enabling investment teams to **optimize portfolio allocations**, improve **cashflow projections**, and **reduce potential losses**, strengthening overall **risk-adjusted returns**.

Ernst & Young

Santa Clara, CA

NLP/GenAI Analyst Intern

Jan 2025 - Jun 2025

- Developed a **compliance analytics tool** allowing **healthcare payers** to upload contracts and query requirements in **natural language**. Leveraged **Python** data preprocessing with an **interactive UI**, reducing contract review time by **70%** and helping five organizations avoid **\$1.2M** in compliance-related risk.
- Automated** analysis of **500+ regulatory clauses**, presenting results via **interactive dashboards** with charts and tables. Delivered **instant risk scores**, enabling compliance teams to **prioritize** high-value gaps and **accelerate decision-making** during weekly executive reviews.
- Created **visual dashboards** for tracking contract review progress and **risk exposure trends** using **Power BI**, improving **stakeholder visibility** and supporting **proactive mitigation strategies** across multiple payer organizations
- Managed **Agile sprints**, coordinating tasks for **data ingestion**, **dashboarding**, and **reporting** modules. Delivered **four major features** ahead of schedule, achieving **full adoption** by compliance teams and improving cross-functional **workflow efficiency**.

Innova AI LLC

San Francisco, CA

Business Analyst Intern

May 2024 - Aug 2024

- Developed a **predictive churn model** by analyzing **2+ years** of customer data (demographics, transactions, service usage) using **SQL** and **Python (Pandas, Scikit-learn)**, engineering **20+ features** (e.g., usage frequency decline, payment delays) and training **logistic regression** and **random forest** models to identify **high-risk customers 60 days pre-churn** with **85% accuracy**.
- Designed **targeted retention campaigns** based on model outputs (e.g., personalized discounts, proactive service outreach), conducting **A/B testing** to optimize intervention strategies, which **reduced churn rate by 15%** within **1 month** and **improved customer satisfaction scores by 30%**, preserving **\$120K annual recurring revenue**.
- Built an interactive **Power BI** dashboard for **real-time churn risk monitoring**, integrating **dynamic filters** (e.g., region, product tier) and presenting **KPIs** (e.g., risk score distribution, **retention ROI**) to executives; collaborated with sales and customer service teams to align actions with business goals, achieving **90% adoption rate** across departments.

Bank of China

Beijing, China

Business Analyst Intern

Jun 2023 - Sep 2023

- Developed a **fraud detection framework** using **Python** and **structured sampling**, **reducing false positives by 18%** while maintaining **89% precision**, preventing **\$1.3M** in potential annual losses and improving **operational monitoring efficiency**.
- Performed **geospatial-temporal analysis** in **Tableau**, identifying **high-risk transaction patterns** such as **63% fraud likelihood** in cross-border midnight activity. Findings informed **real-time alert thresholds** and operational decision-making for **fraud prevention**.
- Collaborated with **risk management** teams to design **dynamic authentication thresholds**, documenting workflows in **Lucidchart**, **streamlining review protocols**, and enhancing the **speed and accuracy** of decision-making for high-risk transactions.