Shuai Wang | Curriculum Vitae

Cincinnati, Ohio 45242

(937) 654-0806 • vanstark88@gmail.com • shuaiwang88.github.io

Summary

Strategic leader in Data Science and Operations Research with 10+ years of experience driving enterprise transformation through advanced analytics, optimization, and AI. Expert in turning complex data problems into scalable solutions that align with business goals, streamline operations, and create new revenue channels. Proven ability to define vision, build cross-functional roadmaps, and lead teams in delivering impactful outcomes across retail operation, insurance, revenue management, fintech, healthcare, education, and logistics.

Education

Wright State University **Dayton, Ohio**
Ph.D. in Engineering, Industrial and Human Systems

Dalian Jiaotong University **Dalian, China**
Bachelor of Management, Supply Chain Management

Technical Skills

Languages: Python, R, Julia, SQL

AutoML: DataRobot, H2O, PyCaret, GluonTS

Optimization: AIMMS, Pyomo, MiniZinc, JuMP, OPL; CPLEX, Gurobi, CBC, HiGHS

GenAI: Snowflake Cortex, LangChain

Reinforcement Learning: Thompson sampling, Epsilon-decay

Time Series: Anomaly Detection, Forecasting, Time Warping

Database: Snowflake, Redshift, ClickHouse, PostgreSQL, MySQL, dbt

Cloud: AWS Lambda, SageMaker, Snowpark, Spark, Airflow, API Gateway, EC2

Visualization: Streamlit, Shiny, Looker, Superset, Tableau, Dash

Professional Experience

Pacific Life Insurance **Newport Beach, CA**
Senior Data Scientist (Principal) *2023–Present*

Strategic Leadership: Define and execute data science strategy for operational transformation, customer experience, and GenAI innovation. Mentor teams and partner with business leaders to prioritize and deliver high-impact initiatives.

- Designed and led rollout of a capability-driven workforce routing platform that aligned operational staffing with business demand, improving efficiency by 10 to 20% across business units.
- Spearheaded deployment of the first enterprise-wide GenAI tool, enhancing customer service quality and response speed using Snowflake Cortex LLM.
- Partnered with business leaders to redesign call center operations with virtual queuing and callback strategies, improving service-level performance.
- Reengineered actuarial modeling through advanced optimization techniques, contributing to more competitive pricing strategies.
- Forecasted demand trends across product lines using scalable AutoML workflows, enabling proactive capacity planning.

Thomasnet **New York, NY**

Principal Data Scientist(Tech Lead), Full time *2021–2023*

Reporting to head of data and AI. Creating roadmaps for data science projects. I started several 0 to 1 data initiatives at Thomasnet including:

- **Internal Enterprise Optimization:**
  - Drove adoption of AutoML to streamline retention strategies and reduce operational blind spots across customer lifecycle.
  - Developed high-impact decision models for ROI-optimized product positioning and digital asset monetization on thomasnet.com.
  - Created reusable Python libraries to accelerate enterprise data pipeline development and enforce quality standards.
- **External Facing:**
  - Created time series anomaly detection (signals) of sourcing activities for institutional investors.
  - Created sourcing trend and stock price/revenue correlation for institutional investors.
  - Led development of the TMX Index, a macroeconomic supply chain indicator leveraged by the United State Congress and media during COVID-19 recovery planning.
  - Collaborated with external partner Datawheel to deliver API-driven visualization tools for data storytelling and monetization.

Kroger/84.51 **Cincinnati, OH**

Lead Operations Research Scientist *2017–2021*

Delivered decision science systems with measurable P&L impact across labor planning, logistics, and inventory optimization for a Fortune 20 retailer.

- **Labor Strategy:**
  - Designed and deployed a machine learning and optimization-based labor planning system that reduced annual costs by 200M to 300M while improving service fulfillment.
  - Directed COVID-19 surge response modeling to inform executive decision-making during peak demand volatility.
- **Inventory and Routing Innovation:**
  - Developed layout-aware routing and replenishment systems to reduce stockout risks and streamline labor workflows.
  - Created integrated productivity tracking and heuristic alert systems to drive in-store performance accountability.
- **Retail Pricing and Promotion Strategy:**
  - Pricing: Using reinforcement learning method Thompson Sampling to set the price for non-everyday items.
  - Promotion: Partnered with merchandising to create a promotion and assortment optimization model (MILP), saving 400M annually through improved vendor-category collaboration.

WSU/Kroger Large Scale Optimization Lab **Cincinnati, OH**

Operations Research Consultant *2012–2017*

Strategic Modeling Advisor: Designed and validated multi-million-dollar optimization solutions across healthcare, retail, and logistics, often informing executive-level decisions.

- Led patient flow forecasting and nurse scheduling optimization for 500 clinics, reducing wait times and improving care delivery.
- Designed cross-store pharmacy inventory transfer network, projecting 30M to 50M in reduced spoilage and emergency orders.
- Architected a cost-saving vehicle routing model that reshaped the national logistics network, delivering 10% savings.
- Provided call center scheduling strategy using advanced heuristics to improve labor coverage and reduce customer hold times.

Wright State University **Dayton, OH**

Graduate Researcher/Teaching Assistant *2011–2017*

Research Impact: Delivered scholarship allocation models adopted institution-wide, enhancing student recruitment and financial planning. Supported academic instruction in analytics.

- **Dissertation: Data mining techniques and mathematical models for the optimal scholarship allocation problem for a state university**. The research uses classification algorithms to find matriculation and graduation rate by varying scholarships. Then the optimization model was developed to optimize revenue under budget, and fairness constraints. This research has prompted the university wide scholarship redesign,

the APS calculator, see Website. This project has resulted a 11% (2014) and 13.9% (2015) increase in direct admit students, which translates into a 5 to 10 million dollars of revenue increase for WSU annually.

- **Teaching:** Supported curriculum in Data Mining and Operations Research.
- **Dissertation Committee:**
  1. Xinhui Zhang (Supervisor): Senior Director of Data Science at Coupang; 3X INFORMS Franz Edelman Award Laureate.
  2. Pratik Parikh: Chair, Industrial Engineering, University of Louisville.
  3. Nan Kong: Purdue University.
  4. Caroline Cao: Director of Engineering Innovation, UIUC.
  5. Subhashini Ganapathy: Dean of Graduate Studies, Wright State University.

Consulting Experience

Pro Bono Projects

- **Cincinnati Public Schools Bus Routing and Bell Time Optimizaion:** Advised district-wide transportation redesign through strategic optimization modeling; results comparable to MIT-led Boston initiative.
- **NYC Dog Care:** Developed multi-site workforce scheduling solution improving operational flexibility and labor satisfaction in a cross-skill environment.