

Capability Statement



The Model Advantage, LLC

www.themodeladvantage.com

Owner: Bingyu Zhang

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Core Competencies

The Model Advantage, LLC is a small business and specializes in development of statistical models and machine learning models, data engineering, data science service and custom application development service.

- **Modeling Service:** expertise in developing, validating and deploying predictive and forecast model, using statistical, econometric, and machine learning techniques.
- **Data Engineering and Data Science:** data management, ETL/ELT data pipeline design, exploratory data analysis (EDA), feature engineering, advanced analytics, and the development of interactive dashboards and reports.
- **Business process automation:** design and implementation of automation solutions, using tools such as Python, Power Automate, and cloud-based services.
- **Custom Application Development:** development of customer software tool, web applications using Python, JavaScript, Power Platform.

Differentiators

- **Proven Expertise Across Industry Leaders:** Led advanced modeling, analytics, and automation projects as a Research Data Scientist at Meta and a Principal Modeler at Freddie Mac.
- **Unique Blend of Big Tech and Regulated Industry Knowledge:** Combines Silicon Valley innovation with regulated financial analytics, offering clients solutions that are both cutting-edge and compliant.
- **Deep domain expertise in financial modeling,** forecasting, and regulatory compliance: More than 10 years building mission-critical credit risk and prepayment models under stringent regulatory standards (e.g., FHFA, OCC).
- **Strong technical team with cross-functional skills** across data science, software, and cloud engineering.

Past Performance

- Subcontract, 2024 – present, IFE group, support IFE at Department of Housing and Urban Development (HUD) on mortgage scorecard development, at USDA on scorecard model validation; Contracting officer: chijack.lin@ifegroup.com.
- Subcontractor, 2024 – present, IFE group, support IFE at Department of Energy (DOE) on data analytics, data visualization and Microsoft Power Platform, Contracting officer: chijack.lin@ifegroup.com.
- Subcontractor, 2023 – 2025, MBO, support PwC on various credit risk model development, validation and deployment projects with clients such as Sallie Mae, SoFi, Bank of Popular, and Merric Bank.
- Subcontractor, 2024, Bayforce, INC, support Bayforce at M&T bank on models' deployment and process automation,

Company Data

- UEI: X242QU137SE5
- NAICS: 541611, 541511, 541910, 541512, 518210, 541720
- CAGE Code: 9LT45
- Business Size: small disadvantaged
- Contact: Bingyu Zhang, Owner
- Certified SWaM Business (841468)

CERTIFIED



Supplier Diversity Strengthens the Commonwealth

by the Virginia Department of Small Business & Supplier Diversity

Before founding the company in 2023, Bingyu served as a Research Data Scientist at Meta and a Quantitative Senior Manager at Freddie Mac. He brings over a decade of hands-on experience in developing financial models, including credit risk and prepayment models, within highly regulated environments. At Meta, he worked on cutting-edge data science initiatives at scale, gaining deep expertise in experimental design, large-scale analytics, and machine learning systems. This unique blend of experience in both big tech and financial services enables him to deliver technically robust, scalable, and business-aligned solutions across industries.