

YAQIN HEI

MACHINE LEARNING ENGINEER

(+86) 13661556467 | amyheiny@gmail.com | [linkedin](#) | [Github](#) | [Google Scholar](#)

EDUCATION

- Hofstra University, Hempstead, NY, USA — M.S. in Business Analytics (GPA 3.73/4.0)** Jan 2017 – May 2019
- **Thesis:** Foreign direct investment from China to the U.S. (published in *Journal of International Business and Law*, 2019). **Relevant coursework:** Multivariate Data Analysis, Data Mining, Python for Data Analysis, Time Series Analysis.
- Fudan University, China — M.S. in Finance (GPA 3.30/4.0)** Jan 2011 – May 2013
- Chang'an University, China — B.S. in Transportation (GPA 3.13/4.0)** Sep 2001 – July 2005

RESEARCH INTERESTS

- Research interests include reinforcement learning (RL), natural language processing (NLP), alignment techniques, self-supervised learning, and building robust, sample-efficient language agents.

RESEARCH & PROFESSIONAL EXPERIENCE

- Senior Architect / Machine Learning Engineer (via Cognizant) — Apple** Mar 2022 – July 2025
- Conversational AI Systems: Investigated transfer learning strategies for LLM fine-tuning, achieving 10% 10% relative improvement in NLU benchmark tasks in natural language understanding. Developed scalable training pipelines and integrated continuous learning frameworks to improve model robustness.
 - IT Operations Automation: Proposed and implemented a multi-LLM orchestration framework with ServiceNow backends, automating 60–70% of repetitive IT service requests. Designed fallback and reliability strategies to ensure robust deployment.
 - Published internal research reports on evaluation metrics (accuracy, precision, recall, F1) and alignment with user experience.
- Algorithm Engineer / Tech Lead — China Construction Bank** Nov 2020 – Mar 2022
- Conducted experiments with causal inference and A/B testing to identify key business drivers.
 - Formulated predictive models for risk detection, improving service delivery and operational efficiency.
- Data Scientist (Contract) — Scotiabank, NYC** Mar 2019 – Aug 2020
- Developed NLP-based classification models for credit risk assessment and predictive routing, improving decision-making and operational efficiency.
- Data Scientist (Contract) — Blackboard Insurance, NYC** Aug 2018 – Feb 2019
- Built personalized recommendation systems with deep learning, optimizing customer experience and engagement.
- Founder — Jingmo Fintech** Sep 2012 – Aug 2018
- Established a data analytics firm delivering ML solutions across finance and enterprise applications.
- Prior experience in academia and finance (2005–2012), including Lecturer at Hainan Political Science and Law Vocational College.

PUBLICATIONS

- Hei, Y., & Pelaez, A. (2019). Factors affecting foreign direct investment from China to U.S. *Journal of International Business and Law*, 18(2), Article 3.
- Hei, Y., & Fan, X. (2007). A reflective study on urban traffic congestion [in Chinese]. *China Public Security (Academic Edition)*, 3, 54–58.
- Hei, Y. (2011). How the trust industry can improve wealth management. *Financial Management*, ISSN 1673-1107.

TECHNICAL SKILLS

Research & Advanced ML: Expertise in LLM Fine-tuning (Parameter-Efficient Methods), Reinforcement Learning (RL), Self-supervised Learning, and Causal Inference; **Frameworks & Libraries:** PyTorch, TensorFlow, Hugging Face, Scikit-learn, LangChain, RAG architectures.

Data Engineering & Cloud: **Data Handling:** Spark, SQL, Data Pipeline Optimization, Feature Engineering; **Cloud Platforms:** AWS, Azure, Google Cloud (GCP), Docker, Kubernetes.

Certifications & Specialized Training: AWS Certified AI Practitioner; Google Cloud ML with TensorFlow Specialization; Introduction to Machine Learning in Production (deeplearning.ai); Computer Vision Fundamentals with Google Cloud (Coursera).