

Shuyue Hou

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PROFESSIONAL EXPERIENCES

Machine Learning Engineer, Full Time	Pingan Bank Co.,Ltd., Shenzhen	Aug 2025-Present
❖ Statistical Modeling & Growth Analytics: Utilized Python (Pandas) to architect a Rate/Mix decomposition engine, quantifying key drivers behind CTR/CVR fluctuations for \$10B+ deposit growth campaigns. This analytical framework transformed business anomaly diagnosis from a multi-day process into near real-time (hours) actionable insights for operations.		
❖ AI Automation & Data Visualization: Designed and deployed a GenAI-powered (LLM/Agent) diagnostic dashboard using Python, automating complex report generation for non-technical stakeholders. Streamlined stakeholder workflows and enhanced organizational efficiency by delivering automated, high-integrity reports through an integrated dashboard ecosystem (leveraging Python principles).		
❖ Data Infrastructure & Reliability Engineering: Engineered a robust end-to-end ETL pipeline (SQL & Python) to resolve critical T0/T1 data alignment discrepancies. Implemented automated data validation protocols that guaranteed 100% data integrity and availability for core attribution models		
Data Analyst, Intern	Xiaohongshu (RED), Beijing	Dec 2023-May 2024
❖ Strategic Bidding Optimization: Analyzed 300,000+ user search behaviors using SQL . Identified high-value, low-competition long-tail keywords to avoid saturated markets, formulating a differentiated bidding strategy that optimized budget allocation.		
❖ Growth Analytics & Conversion Optimization: Executed a full-funnel optimization strategy based on user intent analysis, achieving a measurable 25% boost in advertising ROI. Translated complex behavioral data into actionable tactics that scaled Q1 sales by 18%, proving the scalability of the data-driven acquisition model.		
❖ Business Intelligence Automation: Developed automated performance dashboards (using Tableau principles) to replace legacy manual Excel workflows. This transition slashed weekly reporting turnaround time by 50% and ensured 100% data consistency for cross-functional stakeholders.		

PROJECT EXPERIENCES

Financial Transaction Risk Dashboard	Link: https://public.tableau.com/app/profile/shuyue.hou
❖ Developed an interactive dashboard to analyze trends in customer retention using LOD Expressions, effectively visualizing New vs. Existing user contributions.	
❖ Identified anomalies and high-risk transactions by engineering dynamic thresholding parameters and conducting Pareto Analysis, leveraging data to solve business challenges regarding resource allocation.	
Ensemble Text Classification System (Python, Scikit-Learn)	Link: https://github.com/sHellzip/question_pair
❖ NLP Data Pipeline: Engineered a text processing pipeline using TF-IDF and Word Embeddings, converting unstructured raw text into vectorized features for downstream analysis.	
❖ Ensemble Strategy (AHP): Implemented Analytic Hierarchy Process (AHP) to scientifically assign weights to multiple models (e.g., SVM, Naive Bayes). This ensemble approach optimized the decision boundary, improving precision/recall to over 85%.	

ENTREPRENEURSHIP

Co-founder	OfferLah, Singapore	Feb 2025-Present
❖ Digital Transformation & Stakeholder Management: Spearheaded the evaluation and implementation of an automated scheduling platform to replace legacy manual workflows. Facilitated cross-functional alignment by establishing a "single source of truth" for consultant utilization, reducing administrative overhead by 40% and ensuring data consistency for internal stakeholders.		
❖ Brand Strategy & Growth Analytics: Identified a 15% inquiry friction point via funnel analysis; spearheaded a brand-aligned UI/UX redesign that enhanced market trust and boosted lead conversion by 20%.		

EDUCATIONS

Nanyang Technological University	M.Sc. in Signal Processing and Machine Learning	Aug 2024-Jun 2025
Beijing Institute of Technology	B.Sc. in Statistics	Sep 2019-Jun 2023

Relevant Courses: Advanced Algebra (94), Matrix Analysis (98), Machine Learning (98), Data Structures (91), C Programming (86)
Grades & Awards: **3.3/5.0, 90/100**, Academic Excellence Award (2020, 2023), Red Forest Scholarship (2022)

SKILLS

Visa Status: Require Sponsorship

Languages: English (Professional), German (Intermediate), Chinese (Native)

Programming & AI: Python (Proficient), MySQL (Advanced), Java (Proficient), C, Git, Scikit-Learn, TensorFlow, LLM/GenAI

Visualization: Tableau, Power BI, Excel (VBA, Pivot Tables)