

# Shuyue Hou

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## PROFESSIONAL EXPERIENCES

<b>Machine Learning Engineer, Full Time</b>	Pingan Bank Co.,Ltd., Shenzhen	<b>Aug 2025-Present</b>
<ul style="list-style-type: none"><li>Statistical Modeling &amp; Growth Analytics: Utilized <b>Python (Pandas)</b> to architect a Rate/Mix decomposition engine, quantifying key drivers behind CTR/CVR fluctuations for <b>\$10B+</b> deposit growth campaigns. This analytical framework transformed business anomaly diagnosis from a multi-day process into near real-time (hours) actionable insights for operations.</li><li>AI Automation &amp; Data Visualization: Designed and deployed a GenAI-powered (<b>LLM/Agent</b>) 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 <b>Python</b> principles).</li><li>Data Infrastructure &amp; Reliability Engineering: Engineered a robust end-to-end ETL pipeline (<b>SQL &amp; Python</b>) to resolve critical T0/T1 data alignment discrepancies. Implemented automated data validation protocols that guaranteed 100% data integrity and availability for core attribution models</li></ul>		
<b>Data Analyst, Intern</b>	Xiaohongshu (RED), Beijing	<b>Dec 2023-May 2024</b>
<ul style="list-style-type: none"><li>Strategic Bidding Optimization: Analyzed <b>300,000+</b> user search behaviors using <b>SQL</b>. Identified high-value, low-competition long-tail keywords to avoid saturated markets, formulating a differentiated bidding strategy that optimized budget allocation.</li><li>Growth Analytics &amp; Conversion Optimization: Executed a full-funnel optimization strategy based on user intent analysis, achieving a measurable <b>25%</b> 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.</li><li>Business Intelligence Automation: Developed automated performance dashboards (using <b>Tableau</b> 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.</li></ul>		

## PROJECT EXPERIENCES

<b>Financial Transaction Risk Dashboard</b>	Link: <a href="https://public.tableau.com/app/profile/shuyue.hou">https://public.tableau.com/app/profile/shuyue.hou</a>
<ul style="list-style-type: none"><li>Developed an interactive dashboard to analyze trends in customer retention using LOD Expressions, effectively visualizing New vs. Existing user contributions.</li><li>Identified anomalies and high-risk transactions by engineering dynamic thresholding parameters and conducting Pareto Analysis, leveraging data to solve business challenges regarding resource allocation.</li></ul>	
<b>Ensemble Text Classification System (Python, Scikit-Learn)</b>	Link: <a href="https://github.com/sHellzip/question_pair">https://github.com/sHellzip/question_pair</a>
<ul style="list-style-type: none"><li>NLP Data Pipeline: Engineered a text processing pipeline using TF-IDF and Word Embeddings, converting unstructured raw text into vectorized features for downstream analysis.</li><li>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%.</li></ul>	

## ENTREPRENEURSHIP

<b>Co-founder</b>	OfferLah, Singapore	<b>Feb 2025-Present</b>
<ul style="list-style-type: none"><li>Digital Transformation &amp; 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.</li><li>Brand Strategy &amp; 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%.</li></ul>		

## EDUCATIONS

<b>Nanyang Technological University</b>	<b>M.Sc. in Signal Processing and Machine Learning</b>	<b>Aug 2024-Jun 2025</b>
<b>Beijing Institute of Technology</b>	<b>B.Sc. in Statistics</b>	<b>Sep 2019-Jun 2023</b>
Relevant Courses: Advanced Algebra (94), Matrix Analysis (98), Machine Learning (98), Data Structures (91), C Programming (86)		
Grades & Awards: <b>3.3/5.0, 90/100</b> , Academic Excellence Award (2020, 2023), Red Forest Scholarship (2022)		

## SKILLS

<b>Visa Status:</b> Require Sponsorship
<b>Languages:</b> English (Professional), German (Intermediate), Chinese (Native)
<b>Programming &amp; AI:</b> Python (Proficient), MySQL (Advanced), Java (Proficient), C, Git, Scikit-Learn, TensorFlow, LLM/GenAI
<b>Visualization:</b> Tableau, Power BI, Excel (VBA, Pivot Tables)