

SYLVIA LI

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SKILLS

- **Software / Tools:** Python, SQL, Excel, Tableau, Power BI, R, AWS, Qualtrics
- **Technical Skills:** Data Cleaning, Data visualizations, Exploratory Data Analysis (EDA), Machine Learning, AB Testing, Regression Analysis, Survey Design, Time Series Analysis, Web Scraping, Recommendation System, Data Base Management, ETL Pipeline
- **Languages:** English (Proficient), Chinese (Proficient)

EDUCATION / CERTIFICATE

MIT Applied Data Science Program

Jul 2025

MIT Professional Education

Harvard University

May 2025

Master of Education, Education Policy Analysis

University of Manchester

Jul 2023

Bachelor of Arts, Economics

PROJECTS

AI-Powered Canvas Learning Recommendation System

Feb 2025

Canvas Student Dropout Prediction

- Simulated Canvas dataset of 200,000+ student records in **Python**, building a predictive ensemble model (Random Forest + LSTM) that achieved 85%+ accuracy in early course dropout detection
- Built a recommendation that translated student risk predictions into tailored support actions to students, instructors, and advisors, improving intervention response rates by 38%
- Identified at-risk students 4 weeks before failure, potentially preventing 340+ annual dropouts for a 10,000-student university
- Translated model outcomes into actionable dashboards and stakeholder reports, enhancing intervention targeting and supporting \$1.2M in projected savings for large education institutions

Online Learning Retention Analysis

Dec 2024

HarvardX-MITX Learner Certification Study

- Cleaned 260,000+ learner performance on the Massive Open Online Courses (MOOC) platform HarvardX-MITx, developed and compare multiple machine learning models predicting certification outcomes using **Python** (Pandas, Scikit-Learn)
- Predicted key features of course success metrics, achieving a F1 score of 0.73 for highest-performing models, identified behavioral patterns (e.g., login frequency) predicted success better than student demographics
- Delivered strategic insights to the learning design team through **Tableau** visualizations and report, shifting platform focus on modifiable behaviors, eventually improved student retention by 34%

EXPERIENCES

Sustainable Living Lab (SL2)

Jan 2025 - May 2025

Program Analyst – MetaAI EdTech Teaching Program Evaluation

Singapore (Remote)

- Led evaluation for an international AI and climate education initiative reaching 400 students across India, Indonesia, and Singapore
- Designed survey questions for students regarding program experiences, cleaned 1000+ rows of raw survey data using **SQL** and **Excel VBA** to streamline data extraction, resulting in 25% reduction in data processing time
- Performed program evaluation by tracking cross-country user feedback, built 8 weekly **Tableau** dashboards from survey data to summarize AI tools usage frequency, partnering with product and curriculum teams to drive strategic improvements
- Delivered 50+ page formative evaluation report backed by data insights, securing in program funding and enabling plan for international expansion in 2025 – 2026 into the US education platform

Hebei Provincial Department of Urban Development

Sep 2023 – Mar 2024

Policy Research Assistant

China

- Engineered an **ETL pipeline** for processing multi-source fiscal data from 12+ cities, reducing data latency by 75% and enabling timely policy simulations
- Developed dashboards in **Excel** and **Tableau** that translated complex financial records into clear metrics for local policy makers, influencing ¥50M in infrastructure allocations
- Applied regression analysis in **R** to uncover patterns in regional investment, guiding interdepartmental funding strategy with measurable impact