






# Vira Rithy



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 Portfolio  
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 Phnom Penh, Cambodia

## PROFILE

Passionate about Data Science, AI, GenAI, and Machine Learning, with expertise in machine learning, data analytics, and cutting-edge AI applications. Skilled in extracting insights from complex datasets and delivering impactful solutions. Driven by innovation, collaboration.

## EDUCATION

**DataU Academy**  
Data Specialist

08/2023 - 01/2024

**Institute of Technology of Cambodia**

Bachelor of Engineering (BEng), Data Science  
02/2021 - 02/2025

## CERTIFIED LICENSE

SDOE : DevOps Engineering (*In Progress*)

SalaCyber 

IBM AI Engineering Specialization

IBM 

AI Engineering Bootcamp

Maven - AI Makerspace 

Machine Learning with Python-From Linear Models to Deep Learning

MITx MicroMasters 

## REFERENCE

**Sout Sombrathna**

Data Engineer, DataTicon

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Email: sombrathna.sout@wedatau.org


















## PROFESSIONAL EXPERIENCE

**DataTicon**

AI Engineer









02/2024 - Present

- AI Data Analysis "Text-to-SQL, Voice-to-Chart"**      
Built an AI tool using dynamic databases for text-to-SQL and text-to-chart outputs, enabling quick insights and efficient data visualization
- Khmer Speech Recognition "Speech-to-Text EN-KH"**     
Fine-tuned OpenAI Whisper-Small for KH and EN, achieving a 37% WER. Deployed on Hugging Face with a Gradio-integrated UI.
- Multi-Agent RAG Marketing Content Enhancer**      
The Multi-Agent RAG platform drafts, edits, cites, and adapts, ensuring accurate content with future visual and scalable features.
- Machine Learning "Forecasting Cambodia Tourism"**      
Achieved 97% accuracy in forecasting monthly visitors (e.g., August 2024: Predicted 548K vs. Actual 547K) using an ARIMA-XGBoost ensemble with MLflow tracking.

**DataU Academy**

Data Specialist

08/2023 - 01/2024

- Data Warehousing: "Global Cyclistic Company"**     
Transform massive datasets from diverse sources for accessible insights and powerful sales optimization analytics.
- AI-Powered Sales Analysis & Forecasting**     
Developed a sales forecasting solution for Olist using SARIMAX, XGBoost, and LSTM (top performer), integrating Streamlit and Power BI for revenue, stock, and marketing insights.
- Hazard Vulnerability Dashboard**    
Analyzed Cambodia's hazard vulnerability index (2014-2019) at provincial/commune levels, assessing risks from storms, floods, and droughts, with Khmer and English support.



## PERSONAL PROJECTS

**Scalable Data Processing and Storage Pipeline for E-Commerce User Behavior**

01/2025-02/2025

Developed a big data pipeline for sourcing, processing, and visualizing e-commerce behavior data, leveraging Python for data sourcing, Kafka for streaming, Spark for ETL processing, and Tableau/PowerBI for visualization.

**Legal AI Risk Management**

12/2024-01/2025

Created an AI Risk Chatbot to educate 50 teams on AI risks, ethics, and mitigation, fostering responsible AI adoption and cross-team collaboration."



## SKILLS

### TECHNICAL

#### Programming

Python for Data processing, ML model development, API integration, and PyTorch for deep learning.

#### Big Data

Proficient in the Hadoop ecosystem, Spark for ETL, and Kafka for streaming.

#### Power BI

Data visualization, reporting, and ETL tools for data integration & analysis.

#### Math

Statistics, Probability, Linear Algebra, Probabilistic Graphical Models, Calculus, Numerical Analysis, Discrete Maths.

#### LLMs

Hands-on experience with Prompt Engineering, RAG, Fine-Tuning and Multi-Agent Systems.

### INTERPERSONAL

#### LEADERSHIP

Inspiring others through positive example, effective communication, and collaborative decision-making.

#### COMMUNICATION

Inspiring others through positive example, effective communication, and collaborative decision-making.

#### PROBLEM SOLVING

Prioritize analytical thinking, creativity, and a collaborative mindset to find innovative and effective solutions.

#### BUSINESS CONCEPT

Centers on delivering innovative products/services that address market needs, backed by a commitment to quality, sustainability, and exceptional customer experiences.