

# Mavin Sao

Master's Student in Data Science

### **Personal Info**

- Gwangju, South Korea, South Korea
- +82 1030139109
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Nationality

Cambodian

Date of birth

11/01/1999

#### **Portfolio**

Portfolio Website

### **Skills**

Khmer

**English** 

HTML/CSS/JS	
C/C++/C#	
Java	
Swift	
Python	
Languages	
Korean	

# **Summary**

My research focuses on leveraging data analytics and advanced machine learning techniques, including Natural Language Processing (NLP) and Large Language Models (LLMs), to address complex challenges across various domains.

My expertise includes developing classification models, conducting trend analysis, performing topic modeling, and uncovering insights through text mining and pattern recognition. I am skilled in fine-tuning LLMs to optimize their performance for domain-specific applications, as well as applying deep learning architectures to extract valuable knowledge from unstructured data.

#### **Publication**

# MIRoBERTa: Mental Illness Text Classification With Transfer Learning on Subreddits

Mavin Sao; Hoi-Jeong Lim

IEEE Access, vol.12, pp.197454 - 197466, Dec 2024 (SCIE - IF 3.4)

# Personalized E-Learning Course Recommendations: a Chatbot Approach Using LangChain

Mavin Sao; Hoi-Jeong Lim

Track 2: 2024 International Conference on Digital Contents

# **Work Experience**

# NLP Research Lab Member, Chonnam National University, Gwangju, South Korea

Aug 2023 - Present

- Advanced research in Natural Language Processing (NLP).
- Specialization in text mining, classification, and topic modeling.
- Combining traditional machine learning with transformer architectures and LLMs.
- Focus on model interpretability and performance optimization.

# IT Instructor, Korea Software HRD Center, Phnom Penh 2020 – 2022 July

Basic courses covering web design, advanced courses focusing on iOS mobile application development, and additional training in React Native, UI/UX, Linux, and Docker.

#### **Awards**

# 2023 K Data Science Conference & Hackathon: Creativity Award

2023

A Korean data science event that combines both a conference and a competitive hackathon component.

#### 2022 Global Korea Scholarship by NIIED

2022 August - 2025 August

The GKS (Global Korea Scholarship) is a South Korean government scholarship program that provides opportunities for international students to study in South Korea.

## Scholarship for Software Experts Training Program at KSHRD Center

April 2019 - February 2020

The center provides free, high-quality software development training for Cambodian IT students, helping them become global software experts while offering job placement support in the international market.

#### **Education**

# Master's degree in data science, Chonnam National University

2023 - Present

# Bachelor's degree in computer science, Royal University of Phnom Penh

2016 - 2020

### Korean Language Program, Chonnam National University

September 2022 - July 2023

Received TOPIK Level 3 Certificate from the Korean language exam

#### Software Development Expert, Korea Software HRD Center (Advance)

November 2019 - February 2020

iOS App Development - Full-time course comprising 648 hours of intensive training including lectures, lap research, lab practices, tests, and projects

#### Software Development Expert, Korea Software HRD Center (Basic)

April 2019 - September 2019

Web Development - Full-time course comprising 816 hours of intensive training including lectures, lap research, lap practices, tests, and projects. List of taken courses Java programming language, Spring framework, Web development technologies (HTML, CSS, JavaScript, ¡Query, AJAX, and JSON)

#### Diploma in English, Paññāsāstra University of Cambodia, Phnom Penh

2017 - 2018

Obtained English diploma certificate

# **Project Experience**

#### **Topic Refinement: Integrating BERTopic and Mistral for User Perception Analysis**

Feb 2025 - Present

Develop an optimized BERTopic pipeline integrated with LLMs to extract, refine, and interpret topics from product forum data, focusing on user perceptions of iPhone 15 Series and Galaxy S23 Series.

# **Academic Ally: Course Recommendation Chatbot**

November 2024 - December 2024

The goal of this project is to develop an **Al-powered course recommendation chatbot** that provides **personalized course suggestions** based on user interests and goals. It leverages **natural language processing (NLP) and Retrieval-Augmented Generation (RAG) techniques** to deliver tailored educational recommendations through a **Streamlit application**.

#### **Mental Health Text Classification**

June 2024 - December 2024

The goal of this project is to classify Reddit posts related to mental health using traditional machine learning, deep learning, and transformer models. It introduces domain-specific pretrained models, **MIRoBERTa** and **MIBERT**, which improve classification accuracy. The study also explores ensemble techniques and analyzes word importance to enhance model interpretability.

### Math Forum (iOS Mobile Application)

January 2020 - February 2020

The project is **Math Forum**, a mobile application for Android and iOS that serves as an online math community. It allows users to ask, solve, and share mathematical problems, helping those who need assistance by connecting them with others for solutions.

**Responsibility:** UI/UX Design , Full Stack Development System analyst and system architecture to design and implement the system features

# **HRD Transcript Management System (Web Application)**

June 2019 - August 2019

HRD Transcript Management is a system that provides an easy way to generate transcripts and reports. It contain HRD students documents of all generation and It's useful for Admin to control and search student information.

**Responsibility:** UI/UX Design , Full Stack Development System analyst and system architecture to design and implement the system features.

#### Tax Programs (Window Application)

Jan 2019

Finished and assignment about Tax Programs window application for Java Course at CKCC. **Responsibility:** UI/UX Design , Database analyst

#### Reference

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Mr. Chen Phirum, Deputy Director of Korea Software HRD Center

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