

Kosal Chansothay

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EDUCATION

Institute Of Technology of Cambodia, Department of Applied Mathematics and Statistics, Data Science,
GPA: 3.5 / 4.0

Oct 2022 - Present

Relevant Coursework: Probabilistic Graphical Models, Economic for Engineers, Large-Scale Distributed Systems (Big Data), Data Visualization, Database Design and Admin

Course Completed: Google Data Analytics Professional Certificate | Google Advanced Data Analytics Professional Certificate | Meta Data Analyst Professional Certificate | Data Science camp by Handong Global University | Industry Professional Credentials Track (STIC) | Supervised Machine Learning: Regression and Classification

TECHNICAL SKILLS

Programming Languages: Python, R, SQL, HTML, CSS

Frameworks & Tools: NumPy, Pandas, Matplotlib, Seaborn, Plotly, Power BI, Excel, Spreadsheet

Machine Learning Frameworks: Scikit-learn, Pytorch

PROJECTS

Deep Learning Project: Khmer Sentiment Analysis: | Python, Transformer | Slide Deck *20 Jan. 2025*

- Break down the concept of the attention mechanism and its properties, explaining step by step the backbone of the Generative Pre-trained Transformer.
- Work on a literature review regarding the topic of Transformer architecture, broadening the knowledge around the topic
- Instantiate the pre-trained model for fine-tuning with our own dataset, getting to know how well the model works with Khmer script.

Caffeine Consumption Effects on Academic Performance: | R Programming | Notebook *27 Jan. 2025*

- Conduct research on how coffee consumption affects the performance of university students before the examination versus non-consumer students.
- Use exploratory data analysis to investigate the data before model specification and diagnostics.
- Interpret the results from the research and provide recommendations based on empirical data.

Data Analytics Project: Customer Churn Prediction | Pandas, Matplotlib, Seaborn, Scikit-Learn | Notebook
May 2024

- Developed a machine learning model to predict customer churn using classification techniques.
- Evaluated model performance with metrics like accuracy, precision, recall, F1 score, and confusion matrix.
- Delivered actionable insights to improve customer retention strategies.
- Logistic Regression is implemented as a main model for this classification task
- Handle both numerical and categorical data by scaling (numerical) and labeling/converting (categorical)
- Perform data preprocessing to meet the model requirement

Object Detection and Localization: YOLOv8: Slide Deck | Notebook *25 Jan. 2025*

- Initialize the pre-trained model for Training and Evaluation
- Conduct literature review for the background of its Mathematical formula
- Interpret results from the Training/Inference and Demo

WORK EXPERIENCE

Internship at the Ministry of Post and Telecommunications | CADT

Data Annotation | Khmer Automatic Speech Recognition (ASR) *August 15, 2024-September 30, 2024*

- Renaming video files based on the provided scripts to ensure compatibility with the ASR system.
- Using the ffmpeg framework in Python to deal with the video format and the outputs stored in separate folders.
- Segmenting the text into single words to meet the format of model training of Khmer ASR.
- Test the performance of the KhmerASR mobile application with new data (different context).
- Evaluating the performance of the ASR model by comparing its outputs (hypotheses) with the ground truth (references).

SOFT SKILL

Time Management, Communication, Teamwork, Negotiation, Adaptability, Presentation, Critical thinking, Resilience

LEADERSHIP

Crossroads Church of Cambodia

Discipline Leader in the student dormitory: Achievement 1: Certificate | Achievement 2: Certificate

REFERENCES

Nhim Malai: Lecturer at the Institute of Technology of Cambodia

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Moeun Rathana: Senior Pastor at the Crossroad Church of Cambodia

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