

Visal KAO

Alès, France | visalkao21@gmail.com | 0767798165 | portfolio-visalkaos-projects.vercel.app

linkedin.com/in/visal-kao-17bb3b247 | github.com/visalkao

About Me

An AI Engineer & Data Scientist with 1+ year of experience specializing in Computer Vision and Natural Language Processing.

- Eliminated **97%** of manual document processing and automated multiple administration tasks with Intelligent Document Processing program built from scratch
- Enabled **100%** automated routing of customer emails to the correct department
- Built Automatic **French-Speech-to-Text** Recognition, Sentiment Analysis, Intention Analysis models
- Research published and acknowledged by the Institute of Electrical and Electronics Engineers (**IEEE**).

Professional Experience

AI Engineer, Cosywee – Alès, France

May 2024 - Present

- Built high-performance Intelligent Document Processing solution from scratch and optimized its processing time by more than **90%**.
- Trained models to detect and classify Bon de Commande in email attachments, classify their type and creation year before processing.
- Created datasets to improve a custom handwritten OCR model.
- Built additional programs to facilitate the processes of adding new types of document, effectively generalizing the system for broader application across various form formats.
- Currently developing an email classification system to automatically analyze the intent of incoming client emails sent to the customer service address, enabling intelligent routing to the appropriate departments for faster and more efficient response handling.

Project Team Lead, ViLa Research Laboratory – Phnom Penh, Cambodia

Sep 2022 – July 2023

- Led a team of 11 members on a Computer Vision project to build an program that detect Khmer Character written in the air using just the strokes of index fingers
- Developed a program with C++ for the team to create dataset to train the model

Other Projects

Enhancing Liver SPECT Image Quality: A Novel Approach to Mitigate Respiratory Motion Artifacts
(IEEE)

Paper ↗

Contributed to cancer-related research by enhancing SPECT imaging near the lungs, reducing motion artifacts, and improving image clarity for better diagnosis and surgical targeting

Automatic French Speech-to-Text Recognition

Demo ↗

Tools Used: Whisper, LoRa, Pytorch, transformers, librosa, soundfile

Customer Review Sentiment Analysis - French

Demo ↗

Tools Used: CamemBERT, transformers

RAG-Powered Pharmacist

Demo ↗

Tools Used: Gemini, Sentence Transformer, ChromaDB

Air-writing Khmer Character Recognition

Demo ↗

Tools Used: Pytorch, Feedforward Network, OpenCV

Skills And Languages

- Image Segmentation/classification, Large Language Model (LLM), Natural Language Processing, Speech Processing, Generative AI
- Languages: French, English, Khmer.

Technologies

Languages: Pytorch, Tensorflow, Scikit-learn, OpenCV, Huggingface, LangChain, Git, Docker, Pandas, Numpy, FastAPI.

Technologies: Python, R,

Education

IMT-Mines-Alès, MS in Artificial Intelligence and Data Science

August 2023 – Present

- Double-Degree Program (Institute of Technology of Cambodia)
- **Coursework:** Advanced Mathematics, Machine Learning, Deep Learning, Data Visualization, Decision Analysis, Image processing, NLP

Awards & Recognitions

- Research regconized and presented in the **2024 12th European Workshop on Visual Information Processing (EUVIP)** by IEEE
- Was awarded **Best Presenter** in a prestigious national scientific competition, surpassing various researchers from numerous institutions
- Was awarded **Bourse Excellence Français**