Ngoc Q. Khuat

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💻 Work experience

Metabase, Remote

Software Engineer - *(Oct 2021 - Now)*

- Took many hats and touched various parts of the codebase

- Notable features I shipped: Webhook, advanced search, group manager, convert timezone expressions, webhook

- #4/24 BE contributors of all time

- Take care of the health of the code base with many tech deb issues and build useful dev tools

My works are public on Github: github.com/metabase/metabase

Vantix - Vingroup Advanced Analytics, Viet Nam

Software Lead - *(Aug 2019 - Mar 2021)*

At Vantix we build a solution to measure the productivity of labour workers.

Time-series annotation tool

Our ML models are used to classify human activities based on time-series data recorded using wristbands.

In order to annotate these data we need a special tool that syncs both the time-series data and video footage of a human performing those activities

My main contributions:

- Architect the system
- Design annotation process (patent below)
- Design UI/UX

Stack

- Front end: ReactJS
- Back end: Expressjs
- Database: MySQL

Iot Gateways system

At Vantix we use wristbands to record accelerator + gyroscope data. My project is to build a gateway system to periodically collect the data from wristbands and transfer it back to our cloud.

My main contributions:

- Architect the system
- Implement processes to transfer data from gateway to cloud storage

Stack

- Hardware: Intel NUC
- Platform: Azure IoTHub
- Networking: Bluetooth low energy
- Language: Python

Topica Edtech Group, Viet Nam

Backend Developer / AI Engineer – *(Sep 2018 - Jun 2019)*

- Developed APIs for our LMS - an online class platform to teach English for kids
- Set up the CI/CD for the deployment flow using Jenkins + Kubernetes
- Built a Centralized Class Monitoring System which allows one person to monitor 3 times more classes . Also automate manual processes like sending texts and observing students in class.

- Developed and deployed an Emotion Recognition Engine using Deep Learning which achieved 85% on the private test set.

MotionsCloud, Germany

Remote AI Engineer – (Oct 2017 - Aug 2018)

- Collect and synthesize data to train an engine that detect insurance incidents using Deep Learning which achieved 89% accuracy on private test set.

🔬 Projects

🔥 Meant-to-be startups

TStream

TStream is A live streaming service for developers

With TStream streamers can stream terminal + chat + talk with viewers without leaving the terminal

Link:

- Website
- GitHub

Stack

- Front end: ReactJS (TypeScript)
- Back end: Go Lang
- Networking: WebSocket for terminal streaming and WebRTC for voice chat

📖 Open source

- SpaceX - Auto-docking for SpaceX Dragon 2 on simulation. Implemented in Lisp
- Chessterm - Play chess with Your friend on terminal implemented in Go
- Lifeterm - Conway's Game of Life editor on terminal implemented in C. Use hashlife algorithm to represent cells and updates states

- [OCR](#) - Simple OCR app to extract info from a fixed form using OpenCV

F8 Hackathon, California - United States (2019)

This trip is fully sponsored by Facebook

Our submission: [BeSafe](#) - A chatbot that auto alerts and group nearby people when nature disasters occur

Kawaii - Startup Contest (2018)

With a team of 5, we proposed an idea to address the gap between supply and demand in the educational industry by building a matching platform

- Awarded 4th place out of more than 100 projects

📜 Patents

A Process to annotate human activities

Main author / Patent link: [here](#)

This patent is about an annotation process for human activities recognition task

The main focus of this process is to

- Reduce human bias
- Built-in error checking

VinHR - Solution to measure the production of labour workforce

Patent link: [here](#)

Contribution:

- Research solutions to capture data
- Build POCs for smart wristband to collect data