LUONG TAN DAT

Software Developer

[redacted]

Education

- **Hanoi University of Science and Technology** — Hanoi
  Major: Engineer in control engineering and automation — *Aug 2015 - Jul 2020*

Experience

- **KIKAITECH** — Hanoi
  C++ Developer — *Nov 2020 - Feb 2023*
  - ***Vizgard - https://vizgard.com/***
    i) Visual AI and sensor fusion software for enhancing camera-based systems.
    ii) Use YOLO-based object detection to find out unmanned vehicles and interested objects. Model was trained on proprietary dataset of 130,000+ real-world images, reach high accuracy and low latency after optimized by TensorRT, about 32FPS on NVIDIA Jetson AGX.
    iii) Use DeepSORT as multiple object tracking algorithm, that can observe 15 interested objects simultaneously.
    iv) Use EasyOCR - the lightweight and high accuracy model in Optical character recognition field.
    v) Pose Estimate - Analyze actions and warn pedestrians to enter dangerous areas.
    vi) Capable of controlling PTZ cameras.
    vii) Support AGX's plugin - Maxwell hardware that helps received camera signals from 5 channels.
    viii) Design webUI for intuitive control.
    ix) Dockerize, and automatically build, test, deploy, monitor applications.
    x) ***Technology: C++, JavaScript****, TensorRT, NVIDIA Triton, Yolo, Pose Estimation, Multi-Object Tracking, Jetson AGX, Docker, Gitlab CI/CD, Boost Asio, gRPC, License plate recognize, OpenSSL, WinAPI, PTZ Camera, HTML, CSS, PID control.*
  - ***Teiki - https://shinka.network/products/teiki/***
    i) Working on ML/NLP tasks such as text summarations, content moderation, recommentdation system, text recognition for a community website project.
    ii) Training model Image OCR with custom dataset.
    iii) Design API and dockerize for online inference.
    iv) ***Technology: Python****, Tensorflow, Pytorch, transformer, recommendation system, OCR.*
  - ***Nobi life - https://nobi.life/***
    i) Integrate AI program to smart lamp based on Jetson NX.
    ii) Fall detection and fall prevention based on Deep learning and use TensorRT to optimize highly to run on NVIDIA GPUs.
    iii) ***Technology: Python****, OpenCV, TensorRT, Classifer, Yolov4, ReID, Jetson NX.*
  - ***OutSource***
    i) Application at car's license plate detection and recognition in Japan that extract from CCTV.
    ii) Designing solutions and develop AI project smart cameras to track employees' work progress.
    iii) Developing AI project extract key information from invoice.
    iv) Integrate yolov5 to android device.
    v) ***Technology: C++, Python****, OpenCV, TensorRT, MNN, OpenVino Android, Classifer, Yolov4, ReID, OCR, Information extracted.*

- **METECH COMPANY LIMITED** — Hanoi
  AI Developer — *Aug 2020 - Oct 2020*
  - ***Automatic booking for the Golden Gate restaurant.***
    i) Building communication robots, automatic booking for the Golden Gate restaurant.
    ii) Designing UI for KIOSK by PyQt5.
    iii) Designing signin and register system using face recognition.
    iv) Integrate voice assistance in time of COVID-19 as a touchless interface.
    v) ***Technology: Python****, PyQt5, OCR, RestAPI, face recognition, FAISS.*

- **MICA, HUST** Hanoi
  AI Intern *Jan 2019 - Jul 2020*
  - ***Graduation Thesis: Mathematical Expression Recognition in science documents.***
    i) Research and experiment with WAP algorithm.
    ii) Building restAPI for online inference.
    iii) ***Technology: Python****, Flask, Tensorflow, WAP.*
  - ***Detecting and recognizing faces from images, build an automated attendance system.***
    i) Research and experiment with MTCNN + ArcFace + Faiss algorithm.
    ii) Building desktop based on PyQt5 for automatic attendance system.
    iii) Deploying AI models for facial recognition on AI server on embedded board Jetson Nano.
    iv) ***Technology: Python****, MTCNN, ArcFace, Faiss, Gstreamer, PyQt5.*
  - ***Developing AI project automatic vehicle counting in lane.***
    i) Research and experiment with Yolov4 algorithm, GStreamer, NVIDIA DECODE SDK.
    ii) Building desktop based on PyQt5 for automatic attendance system.
    iii) ***Technology: Python****, Yolov3, PyQt5, Gstreamer, NVCodec.*
- **RANGDONG LIGHT SOURCE AND VACUMM FLASK COMPANY** Hanoi
  IOT Intern *Jun 2018 - May 2019*
  - **S**mart things in Rang Dong ecosystem...
    i) Develop smart lamp, smart curtain with Tuya module based on ESP8266
    ii) Develop smart pocket based on ESP8266, and draw PCB with Altium.
    iii) Develop Wifi - Bluetooth gateway that help to connect bluetooth devices to the internet.
    iv) ***Technology: C/C++****, ESP8266, Altium, Tuya, STM32, RaspberryPi*

Skills

- Algorithms: machine learning, deep learning and computer vision.
- Programming languages: C/C++, Python, HTML/CSS/Javascript, etc.
- AI frameworks and Library: NumPy, Keras, OpenCV, etc.
- C++ frameworks and Library: Boost, C++ Standard Template Library (STL), Threading, OpenCL, Protobuf, NVIDIA CODEC SDK, etc.
- Networking: Socket, HTTP(S), gRPC, etc.
- Embedded device: STM32, ESP8266, Jetson Nano, Jetson Xavier AGX, Jetson Orin AGX, Raspery Pi, etc.
- Technologies: Flask, Git, Linux, SQL, TensorRT, NVIDIA Triton etc.
- Teamwork, communication with customers in England and Belgium, observation and handling of problems when having trouble.
- Languages: English (TOEIC: 610)