KEA KIMLEANG

Master Graduate - Computer Science & AI Convergence

CONTACT

- kimleang.rscher@gmail.com
- keakimleang.com
- Kea-Kimleang
- KimleangSama
- Kea-Kimleang
- +82 10 2945 9808

SKILLS

- **Web Development** 5+ yrs
- **Mobile Development** 2+ yrs
- **Software Teaching** 2+ yrs
- **Internet of Things** 1+ yrs
- **Machine Learning** 2+ yrs
- **Quantum Computing** 2+ yrs
- **Quantum ML** 1+ yrs

EDUCATION

M.S. - Artificial Intelligence Convergence — 2022 - 2024
Pukyong National University - Busan, South Korea

Passed with **4.215 of 4.5 GPA**. Working 2.5 Years on Quantum Algorithm and Quantum Machine Learning with a thesis "Leveraging QAOA to Optimize the Knapsack-Problem-based Electric Vehicle Charging Solution."

B.S. - Computer Science & Engineering — 2016 - 2020
Royal University of Phnom Penh - Cambodia

Passed with **3.8 of 4 GPA**. Fully Passed Final Exam.

A Year Training - Software Development — 2019 - 2020
Korea Software HRD - Phnom Penh, Cambodia

Passed with **A** Grade. Major projects were Financial Report Web Application and Forum iOS Application.

WORK EXPERIENCE

Research Assistant — 2022 - 2024
Pukyong National University, Busan, South Korea

Researching on Machine Learning applied to time series data and EPS system, Embedded System, Quantum Algorithm, and Quantum Machine Learning. Actively engaged in algorithm and application development, complemented by extensive academic writing resulting in a plethora of research papers.

IT Instructor — 2020 - 2022
Korea Software HRD Center, Phnom Penh

Teaching web development with ReactJS and Angular technology, iOS mobile development, DevOps, as well as Spring Boot framework for backend development. Seamlessly managing HRD registration websites, servers, and domain setups for website online presence.

Java Developer — 2018 - 2019
IT Solution Company, Phnom Penh

Developing desktop application using Java GUI for user interaction. Making connection of the application with Salesforce CRM integration.

PROJECTS

Quantum Machine Learning Software Stack — 2023 - 2024
Tool: Web Development, Quantum Computing

A full stack development approach for web applications is employed to create and experiment with various QML applications. This application provides a unique approach for crafting QML tailored to specific models within financial, logistics, and optimization algorithms.

ACHIEVEMENTS

KSHRD

Web and Mobile Development
Qualified among in the top students within the courses.

DevOps Engineering

DevOps for both Backend and Frontend Deployment
A certificate issued by udemy to prove basic understanding of DevOps engineering.

Presentation

Delivering both Face-to-Face and Online Presentations
Have done delivering presentations to both small and large audiences as well as online presentations.

Micro-display Controller Design — **2022 - 2023**
Tool: Embedded System, FPGA, Machine Learning

A virtual reality hardware design leveraging embedded hardware with FPGA technology to optimize the adaptive foveated rendering algorithm. This approach optimizes hardware resources by allocating high computational power specifically only to users' eye gaze location, thereby it is reducing overall resource consumption significantly.

Distributed Power Controller Management — **2022**
Tool: Web Development

An advanced web application showcasing installed sensors throughout South Korea. Offering control, detection, management, and visualization of both healthy and abnormal sensor data with seamless web interface.

Distributed Power Controller Management — **2019 - 2020**
Tool: Web and iOS Development

A Financial Report web app with beautiful yet informative graphs and an iOS Forum application for users to seamlessly engage in discussions.

PUBLICATIONS

Enhancing a Classical Convolutional Autoencoder with a QAOA for Image Noise Reduction — **Under Review**
ScienceDirect Neurocomputing, 2024

Authors: **Kea, Kimleang**, Won-du Chang, Hee Chul Park, Youngsun Han
Status: Under Review

Multiple Sensor-based Adaptive Foveated Display Control for Enhanced Computational Efficiency of Virtual Reality Devices — **Under Review**
IEEE Sensor Journal, 2024

Authors: **Kea, Kimleang**, Youngsun Han, and Tae-Kyung Kim
Status: Under Review

A Federated Learning Approach Efficient Anomaly Detection in Electric Power Steering Systems — **Under Review**
IEEE Access, 2024

Authors: **Kea, Kimleang**, Youngsun Han, and Young-Jae Min
Status: Under Review

Leveraging Knapsack QAOA Approach for Optimal Electric Vehicle Charging — **SCIE - IF 3.9**
IEEE Access, 2023

Authors: **Kea, Kimleang**, Chansreynich Huot, and Youngsun Han
Status: Accepted and Published

Enhancing Anomaly Detection in Distributed Power Systems AutoEncoder-based Federated Learning — **SCIE - IF 3.7**
PloS One, 2023

Authors: **Kea, Kimleang**, Youngsun Han, and Tae-Kyung Kim
Status: Accepted and Published

A Deep Learning Approach to Detect Anomalies in an Electric Power Steering System — **SCIE - IF 3.847**
MDPI Sensors, 2022

Authors: Alabe, Lawal Wale, **Kea, Kimleang**, Youngsun Han, Young Jae Min, and Taekyung Kim
Status: Accepted and Published

WORKSHOPS & CONFERENCES

International Conference on Green and Human Information Technology — Jan 2024
Le Quy Don Technical University, Hanoi, Vietnam

International Conference on Quantum Techniques in Machine Learning — Nov 2023
CERN, Geneva, Switzerland

International Conference on Consumer Electronics Asia 2023 — Oct 2023
Paradise Hotel Busan, Busan, South Korea

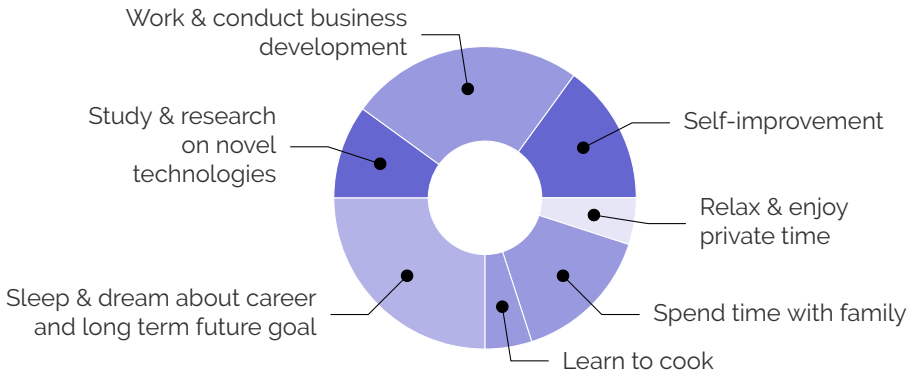
A Presented Paper: Accelerating YOLO-based Real-time Object Detection via Foveated Rendering

International Conference on Systems, Programming, Languages, and Applications: Software for Humanity, OOPSLA Track — Dec 2022
University of Auckland, Auckland, New Zealand

LANGUAGES

- **Cambodian**: Native language.
- **English**: Proficient in Speaking, Listening, Reading, and Writing.
- **Korean**: Impoverished in Speaking, Listening, Reading, and Writing.

A DAY OF MY LIFE



REFERENCE

- Put all the points that are not covered in **above sections**.