Khanh Le

Nhan-Khanh Le | Vietnamese | nk.le.hcmc@gmail.com | linkedin.com/in/khanhln | github.com/nk-le

WORK EXPERIENCE

Embedded Firmware Engineer
Sep. 2023 – Now

AMDC, Ltd.
Ismaning, Germany

- Software architecture design and development of real-time embedded flight controller
- System engineering conforming DO 178C, DAL D for safety-critical aerial system
- Flight control algorithms design, simulation, and performance verification

Research Visitor - External Master's Thesis
Mar. 2023 – Sep. 2023

University of Maryland, Institute for Systems Research
College Park, USA

- Time-Robust Path Planning with Formal Methods (Signal Temporal Logic)
- Model-based Systems Engineering
- Mixed-Integer Linear Programming

Embedded Software Developer
Mar. 2020 – Mar. 2023

Air and Missile Defense Consulting, Ltd., Working Student
Ismaning, Germany

- Development of real-time embedded flight controller (C/C^{++}) for autonomous quadrocopter
- Digital signal processing - filter design and development of sensor fusion unit
- Flight simulation and performance verification with Matlab and Simulink

Machine Learning on the Edge
Feb. 2019 – May 2019

Boot.AI, Ltd., Research Student
Munich, Germany

- Development of a convolution neural network for a fruit classification system

Calculus & Linear Algebra Tutor
Oct. 2018 – Mar. 2019

Technical Univeristy of Munich
Munich, Germany

Embedded System Developer
Aug. 2018 – Dec. 2018

XLOG Elektronik, Ltd., Internship
Munich, Germany

- Development of an electrically controlled platform to regulate the leaning behaviour of a Motorbike model
- Circuit analysis, IOT system design.

EDUCATION

Master of Science | *Automation and Robotics & High-Frequency Technology*
Sep. 2020 – Sep. 2023

Technical University of Munich, Department of Electrical and Computer Engineering
Munich, Germany

- *Expertise:* Real-Time Embedded System, Dynamic System, Optimal Control, Radar Signal and Systems, High-Frequency Components, Software Architecture & Design Patterns

Bachelor of Science | *Control Theory & Embedded System*
Sep. 2017 – Sep. 2020

Technical University of Munich, Department of Electrical and Computer Engineering
Munich, Germany

- *Expertise:* Control Theory; Optimization, Signal Processing, Real-Time Embedded System

College of Science and Technology
Jan. 2016 – Sep. 2017

Karlsruhe Institute of Technology
Karlsruhe, Germany

Research Interest and Publications

Time-Robust Mission Planning with Spatial-Temporal Specifications   Sep. 2023

Master's Thesis - University of Maryland, Institute of System Research
- American Control Conference (ACC) 2024

Distributed Coverage Control of Constrained Unicycle Multi-Agent Systems   Sep. 2022

Technical University of Munich, Department of Information-Oriented Control
- IEEE Transactions on Automation Science and Engineering

FedXGBoost - Scalable and Secure Vertical Federated Learning XGBoost   April. 2021

Technical University of Munich, Department of Information-Oriented Control & ByteDance Ltd.
- IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP) 2023

Skills

Programming: Real-time/Event-driven Embedded Programming, (C/C^{++}), Python, MATLAB, Optimization

Modelling: UML2, SysML, Hierarchical State Machines

Target Systems: ARM Cortex-M7/ARMv7 (NXP, ST), Arm Cortex A53 (Raspberry-Pi)

Technologies: Git, Model-Based Systems Engineering, Cameo Systems Modeler, Enterprise Architecture, LTSpice

Languages: Vietnamese (Native), German(C1), English (C1)