

# Achirarat Chottianchaiwat

Langstraße 18-20, 68169 Mannheim, Deutschland

☎ (+49)163-8357972 | ✉ achirarat.chot@gmail.com | 🏠 achirarat-chot-lebenslauf.netlify.app | 🔗 linkedin.com/in/achiraratshot/

## Personal Profile

Electrical Engineer with a Master's in Communication Engineering and Bachelor's in Industrial Electrical Engineering (Second-Class Honors). Combines research expertise in molecular communication, convex optimization, and signal processing with hands-on industry experience developing control systems (Toyota), testing GNSS trackers (Keysight), and implementing rail signaling solutions (ALSTOM). Proficient in MATLAB, C, and Python, with a passion for bridging theoretical innovation with practical engineering applications. Seeking a challenging engineering role to further grow and contribute to cutting-edge solutions.

## Work Experience

### Research Assistant, Molecular Communication Testbed Developer

Oct 2024 - Apr 2025

Resilient Communication Systems, TU Darmstadt

Darmstadt, Germany

- Implementing the offline and real time decoder for molecular communication test kit
- Implementing the Pocket Lab-on-Chip test kit

### R&D Software Developer (Internship)

Oct 2022 - Mar 2023

Keysight Technologies Deutschland GmbH

Böblingen, Germany

- Integrating the RTCM/ RTK message from GSG-8 into US-CV2X stack.
- Testing the GNSS tracker for the GSG-8 system.
- Support GSG-8 Lab testing environment

### Software Engineer

Sept 2020 - Oct 2021

ALSTOM Transportation Thailand

Bangkok, Thailand

- Software design, implementation, and subsystem integration in the signaling of the CITYFLO650 model (Gold line APM and Pink/Yellow monorail projects in Bangkok, Thailand) using C programming language
- Support site issues for Gold line APM skytrain
- Testing and tuning the train's propulsion and brake for drivability

### Software Engineer

Jul 2017 - Aug 2020

Toyota Tsusho Denso Electronics Thailand (TDET)

Bangkok, Thailand

- Analyzing the vehicle function requirement and implementing software for vehicle function using MATLAB & SIMULINK.
- Testing Automotive Software with MILs (Model in the loop) and HILs (Hardware in the loop)
- Responsible as configuration manager to keep track of the software development process, software and paper versions
- Instructor for the software development, MATLAB library usability and software development process for newly graduated members

### Q&A Engineer (Internship)

May 2016 - Aug 2016

Siam Kubota Corporation Thailand

Chonburi, Thailand

- Implementing and reading the value of the sensor from the vehicle transmitting to the headquarter at Chonburi, Thailand

## Education

### MSc. in Communication and Information Engineering

October 2021 - March 2025

Technische Universität Darmstadt

Darmstadt, Germany

- **Master's Thesis:** Optimization of Molecule Mixtures and Cross-Reactive Sensing Arrays in Molecular Communication

### BEng. in Industrial Electrical Engineering (Second-Class Honors.)

May 2013 - May 2017

Thammasat University

Patumtani, Thailand

- **Bachelor's Thesis:** "Vehicle Datalogger" published in The 40th Electrical Engineering Conference (EECON-40), Thailand

## Skills

<b>Programming</b>	MATLAB/ SIMULINK (Advanced), Python (Proficient), C/C++ (Proficient), SQL (Intermediate), LabView (Intermediate)
<b>Miscellaneous</b>	Linux, Shell (Bash/Zsh), Microsoft Office, Git, SVN, Jira, DOORS, Networking, AI, AUTOSAR, V2X
<b>Soft Skills</b>	Time Management, Teamwork, Problem-solving, Documentation, Engaging Presentation.

## Languages

---

<b>English</b>	Full Professional proficiency (C1)
<b>German</b>	Intermediate (B1)
<b>Thai</b>	Native proficiency
<b>Japanese</b>	Intermediate (A2)

## Achievements

---

<b>2020</b>	The representative of TDET company to attend the Capability Maturity Model Integration (CMMI) exam
<b>2020</b>	The representative of TDET company to attend “Denso’s Global New Year Message Event, Bangkok, Thailand”
<b>2019</b>	Earned the first-runner up award of TDET programming contest round 2/2019
<b>2019</b>	Attended the R&D meeting for developing new automobile functionalities at Denso’s Japan headquarters.
<b>2016 - 2017</b>	Elected as a student committee of the TU-PINE engineering program
<b>2015</b>	Elected as the area team leader in the Cheer club for the CU-TU traditional Football Match
<b>2014</b>	The representative of the faculty for joining the Robot design contest at Faculty of Engineering, Chulalongkorn University
<b>2013 - 2017</b>	Certificate of Academic Excellence, Faculty of engineering Thammasat university, 8 semesters of studying

## Certificates

---

<b>05/2021</b>	Programming a Quantum Computer with Qiskit, Coursera Project Network
<b>05/2021</b>	Convolutional Neural Networks, deeplearning.ai
<b>04/2021</b>	Structuring Machine Learning Projects, deeplearning.ai
<b>03/2021</b>	NDG LINUX SERIES, NDG
<b>01/2021</b>	The Bits and Bytes of Computer Networking, Google
<b>05/2020</b>	Mathematics for Machine Learning: Linear Algebra, Imperial College London
<b>05/2020</b>	Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization, deeplearning.ai
<b>04/2020</b>	Neural Networks and Deep Learning, deeplearning.ai
<b>04/2020</b>	Introduction to Programming with MATLAB, Vanderbilt University
<b>04/2020</b>	Crash Course on Python, Google
<b>02/2020</b>	Essential SQL for Everyone, Born to Dev
<b>11/2019</b>	Learning LabVIEW, LinkedIn Learning
<b>10/2019</b>	Mind at work, Denso Training Academy
<b>09/2019</b>	On The Job Training (OJT), Denso Training Academy
<b>07/2019</b>	Python for Data Science, AI & Development, IBM

**References available upon request.**