# Nikolai Madlener

# **EDUCATION**

#### Technical University of Munich

October 2021 – December 2023 (expexted graduation)

Master of Science in Informatics (Computer Science)

Munich, Germany

• Focus on Software Engineering, Machine Learning and Distributed Systems

#### Technical University of Munich

October 2017 - June 2021

Bachelor of Science in Informatics (Computer Science)

Munich, Germany

• Minor: Economics | Bachelor Thesis: "How to Build on Top of an Existing Software-System"

# EXPERIENCE & INTERNSHIPS

ALEAS AG

July 2019 – Present Ruggel, Liechtenstein

Software Engineer (Working Student)

nugget, Liectitenstein

- $\bullet$  Full stack web application development with .NET for internal and user-facing software with 2500+ active users
- Development of a cross-platform team-challenge app with React Native and the Firebase platform

#### Technical University of Munich, Digital Health Group

October 2021 – Present

Software Engineer (Academic Assistant)

Munich, Germany

- Development of a navigation iOS app that improves users' fitness and health by supporting multimodal routing
- Improved average route search perfromance by over 50%

**Tesla, Inc.** March 2021 – April 2021

Logistics Software System Configuration (Internship)

Grünheide, Germany

- Initial configuration of the material flow software system for intralogistics at the Tesla Giga Berlin factory
- Requirements engineering and architectural conception based on exchange with material flow planners
- Close exchange with software engineers of US-team and technical support for logistics workers on site

#### Projects & Expertise

encore. App  $\mid$  Swift, SwiftUI, Spotify SDK, REST

May 2020 - Present

- Development of an iOS app that allows users create music parties with friends
- Participants of a party can add and vote for songs in a shared music queue

Ferienakademie 2022 – "Decentralized Decision Making" | Swift, SwiftUI, MQTT/Coaty September 2022

- Research summer school in cooparation with Siemens for selected students aimed at exploring innovative ideas
- Development of a self-organized robot delivery system with focus on decentralized decision making
- Built an iOS app that visualizes the robots' status/location in realtime using a message-ortiented architecture

Swift Tutor | Swift, SwiftUI, UIKit, Vapor, UML

2020, 2022

• Taught iOS development to 70 students at the Swift bootcamp of the practical university course 'iPraktikum'

TUM Campus App Contributions | Swift, SwiftUI, WidgetKit, REST

December 2021

• Extension of the open source TUM Campus app with daily meal plan iOS homescreen widgets for 10+ cantinas

# EXTRACURRICULAR EXPERIENCE

#### HackaTUM 2022 Overall Winner

November 2022

- Overall winner of HackaTUM 2022, one of Europes biggest hackathons, out of 220 teams (800 paritipants)
- Winner of the Sixt Challenge out of 20 teams

# MINGA Mentor

August 2022 – Present

 $Technical\ University\ of\ Munich\ (TUM)$ 

Munich, Germany

• Mentor for incomming exchange students to guide them during their time in Munich and at TUM

# SKILLS

Programming Languages: Swift, TypeScript, Java

Frameworks: SwiftUI, React Native, .NET, Spring, Coaty (MQTT) Tools: Git, Docker, Firebase, Xcode, VS Code, Bamboo, Testflight