

# Zhaoxi Liu

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TU Delft MS Embedded Systems

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## TECHNICAL EXPERIENCE

### Indoor Localization Android applications

04/2022 - 06/2022

- Developed 2 Android applications to detect the user's current activity and location in Java
- Built a statistical model with self-collected Wi-Fi signal strength distribution data to determine the user's location
- Collected and processed data from the gyroscope and accelerometer to detect the user's direction and current activity
- Detected altitude change based on Google location service API

### Big data processing program with Spark

09/2021 - 11/2021

- Developed a large-scale data processing program using Spark and Amazon EMR to process the entire OpenStreetMap data set
- Observed the performance with Spark monitoring tools (Spark history server, Ganglia)
- Optimized the computation process based on the underlying logic of Spark transformation/action

### Quadcopter drone

04/2022 - 06/2022

- Developed a Quadcopter drone with an ARM Cortex M0 micro-controller and sensor modules in C
- Mapped the input signal from PC and joystick into flight configuration
- Designed the communication protocol between the controller and the PC
- Built a UI to display crucial data read from Socket with Tkinter

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## SKILLS

<b>Programming Languages</b>	<i>Proficient: C++, Python, Java Exposure: Scala, SQL, HTML</i>
<b>Frameworks &amp; Libraries</b>	Spark, Tensorflow, OpenMP
<b>Infrastructure &amp; Tools</b>	Git, Linux, AWS, IntelliJ, Android Studio, Jupyter notebook, CMake, Docker, LaTeX, Markdown
<b>Communication</b>	English, Chinese

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## EDUCATION

### Delft University of Technology

*Master of Science Embedded Systems(Software track), grade 7.8/10*

Expected 08/2023

#### Coursework

Machine Learning, Supercomputing for Big Data, Smartphone Sensing, Embedded System Laboratory, Software Architecture, Artificial Intelligence for Software Testing and Reverse Engineering, Networking, C++ Programming, Algorithms and Data structures

#### Projects

- Racket Compiler: Developed a simple compiler that translates a subset of Racket Language into x86 assembly code in Scala
- Log4j2 analysis: Team of 4 conducted an in-depth study of the architecture of Log4j2 and merged 2 pull requests to the project
- Automated software testing: Team of 2 developed programs to automatically generate test cases and fix bugs for the RERS problems, and applied state-of-the-art tools(EvoSuite, ASTOR, etc.) to real software

### Nanjing University of Science and Technology

*Bachelor of Engineering in Electronic Science & Technology*

09/2016 - 06/2020

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## ACTIVITIES

Summer session at University of California, Berkeley (Course taken: CS61A Structure and Interpretation of Computer Programs)

06/2018 - 08/2018

International Training Program of School of Electronic and Optical Engineering

03/2018 - 06/2018

The Association of Overseas Study at NJUST, Founder Minister

09/2017 - 09/2020

Teaching Assistant of Computer Principle & Application

09/2019 - 01/2020

Leading player, Football team of the School of Electronic and Optical Engineering

09/2016 - 09/2020