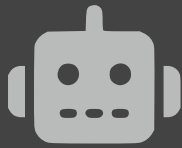


# KIMBERLY MCGUIRE, PHD



## ROBOTICS ENGINEER INDEPENDENT CONTRACTOR

knmcguire.github.io Malmö, Sweden  
 In/knmcguire Dutch/American  
 knmcguirerobotics@gmail.com

### SUMMARY

Kimberly McGuire is an independent roboticist with a background in aerial robotics and embedded systems. She completed her PhD on swarm robotics in 2019 and worked with the Crazyflie until 2024. She is also an experienced speaker and technical writer and currently working on robotic simulation projects.

### HIGHLIGHTS

- Best Speaker Robotics Developer day
- Published paper in Science Robotics
- Co-lead of Aerial ROS Community group

### EXPERIENCE

#### ROBOTICS ENGINEER

2022-2024 Bitcraze AB, Sweden

As robotics engineer at Bitcraze I focus on integration of Aerial robotic vehicles with the ROS 2 framework with added simulation support.

#### EMBEDDED SOFTWARE DEVELOPER

2019-2022 Bitcraze AB, Sweden

As embedded software engineer I worked on the freeRTOS C firmware of the STM32 based Crazyflie nano quadcopter, which involved sensor fusion and onboard autonomy.

#### PHD RESEARCHER

2019-2022, TU Delft, The Netherlands

I was tasked to design a group of tiny quadcopters, only weighing about 50 grams, to achieve autonomous exploration in indoor structured environments.

#### INTERN COMPUTATIONAL PHOTOGRAPHY

2013, NEC, Japan

I worked on validating a novel high sensitivity sensing method for computational photography to utilize near infrared light imagery

### SKILLS

CAD ★

Windows ★

Simulation ★

Aerial ★

C ★

Computer Vision ★

Gazebo ★

Matlab ★

State Estimation ★

Ubuntu ★

Blender ★

Crazyflie ★

Mobile ★

Optical Flow ★

Python ★

ROS ★

RTOS ★

3D printing ☆

C++ ☆

Control ☆

Deliberation ☆

ESP ☆

Keras ☆

Neural Networks ☆

OpenCV ☆

Paparazzi ☆

SOLIDWORKS ☆

Swarm ☆

Webots ☆

★ Expert ☆ Proficient

And many more...

### EDUCATION

#### PHD AEROSPACE ENGINEERING

2019 - TU Delft, NL

Swarm Robotics, Embedded systems

#### MSC MECHANICAL ENGINEERING

2014 - TU Delft, NL

Bio-inspired Robotics, Computer vision

#### BSC INDUSTRIAL DESIGN ENGINEERING

2011 - TU Delft, NL

Industrial product design methods

See my portfolio: [knmcguire.github.io/projects](https://knmcguire.github.io/projects)