

# SIMON MUELLER

Medical Student, Computer Scientist (MSc)

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Maastricht



## EXPERIENCE

### Teaching Assistant

**Maastricht University**

📅 April 2022 – ongoing     📍 Maastricht

Supporting the lecturers for the courses "Computer Skills, FHML", "Intelligent System", "Introduction to Programming I/II" and "Software Engineering"

### Scientific Assistant

**University of Bonn / Ophthalmology clinic UKB**

📅 Sept 2019 – 2023     📍 Bonn

- Training Deep Learning models to diagnose diabetic retinopathy from smartphone examinations and peripheral artery disease from fundus.
- Tutor for the course "Visual Data Analysis".

### Student Assistant

**Fraunhofer Institute for Algorithms and Scientific Computing**

📅 Oct 2018 – Sept 2019     📍 Sankt Augustin

- Developing a grammar-based parser with ANTLR4 for the Biological expression language (BEL)
- Natural language processing (Named entity recognition, semantic relationships) for psychological assessments

### Dual Student

**IBM Germany GmbH**

📅 Oct 2014 – Sept 2017     📍 Stuttgart

Six internships with different focuses:

- Machine Learning in Healthcare, Sentiment analysis of customer feedback
- Technical support for mobile solutions in Chicago / Agile development
- Full Stack Developer for interactive Webapps

## PUBLICATIONS

**Multiple instance learning detects peripheral arterial disease from high-resolution color fundus photography**  
Scientific Reports, 1st Author

**Automated Detection of Diabetic Retinopathy From Smartphone Fundus Videos**  
7th MICCAI Workshop on Ophthalmic Medical Image Analysis, 1st Author

## EDUCATION

### International Track Medicine

**University Maastricht**

📅 Sept 2020 – June 2026

Topics: Human medicine with a focus on global health, Problem based learning

### M.Sc. in Life Science Informatics

**Friedrich-Wilhelms-University Bonn**

📅 Sept 2017 – June 2020

Thesis: Transfer learning and feature fusion for detecting diabetic retinopathy from smartphone fundus videos - got the thesis award of the Bonner Informatik Gesellschaft (BIG), GPA: 3.3 (max 4.0)

### B.Sc. in Applied Computer Science

**Corporate State University Stuttgart**

📅 Oct 2014 – Sept 2017

Thesis: Anbindung eines Cluster- Dateisystems an eine Cloud, GPA: 3.4

### General University Entrance Qualification

**Collegium Josephinum Bonn**

📅 Sep 2006 – Jun 2014

Focus Mathematics and Physics, GPA: 3.9

## SKILLS

German (C2, native)

English (C1)

Dutch (B2 + medical terms)

IT Support

Object Oriented Code

Deep Learning

Computer Vision

Web Engineering

Cloud Computing

Agile Development (SCRUM)

Linux

CI/CD

Python

Java

Javascript/Node.js

C/C++

OpenCV

PyTorch

scikit-learn

OpenGL

## INTERESTS

### Volunteering

Talking and supporting youngsters @ease

### Martial Arts

Shotokan Karate