PERSONAL DETAILS

Name
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Date of birth
28-11-1997

Nationality
the Netherlands

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Interests
Sports
Data science
Medicine

Languages
Dutch ●●●●●
English ●●●●
German ●●●

RUBEN VAN DER WAERDEN

I am Ruben van der Waerden, a driven and curious professional who embraces new challenges, whether advancing AI research in a PhD role or completing a marathon. I'm always eager to explore new opportunities and expand my expertise.

Education

Jan 2020 – Nov 2022

Medical Engineering
University of Technology Eindhoven
Focused on translating clinical questions into technological research by applying computational fluid dynamics and extending expertise in machine and deep learning.

Sep 2016 – Nov 2019

Medical sciences and technology
University of Technology Eindhoven
Provided a foundation in chemistry, biology, and engineering for healthcare innovation, with a focus on computational fluid dynamics.

Work experience

March 2023 – today

PhD position
Radboudumc Nijmegen
The focus is on automated analysis using artificial intelligence of optical coherence tomography (OCT) images during cardiac catheterization procedures, as a potential new method to assess the risk of myocardial infarction in patients with coronary artery disease.

June 2022 – Oct 2022

Internship
University of Sheffield
The aim of the internship is to develop a Lattice Boltzmann model for the vein with its valve and clotting formation. This model is built from scratch in the programming language C.

May 2021 – April 2022

Graduation project
Freesense Solutions
The aim of the project is to determine blood pressure using a photoplethysmogram (PPG) signal. Both medical and technology knowledge come together. The aim is to estimate blood pressure by using both machine/ deep learning techniques and physiological models, building from scratch in Python.

Skills and power

Hard skills
Latex, C, Python, Matlab

Soft skills
Communication, Eager, Passion-driven, Critical

Scientific output

"Artificial intelligence for the analysis of intracoronary optical coherence tomography images: a systematic review"
European Heart Journal – Digital Health, 2025

"Comprehensive full-vessel segmentation and volumetric plaque quantification for intracoronary optical coherence tomography using deep learning"
European Heart Journal – Digital Health, 2025

"Attenuation artifact detection and severity classification in intracoronary OCT using mixed image representations"
Medical Imaging, 2025

References (on request)

Prof. Dr. Ian Halliday *(University of Sheffield, United Kingdom)*
Prof. Dr. Niels van Royen *(Radboudumc, the Netherlands)*