Joost

Van Der Putten

29 Augustus 1992
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Laaghei 2
5508 VP
Veldhoven
Netherlands

Analytical
Flexible
Curious
Team player
Critical

Education

2014 – 2016 **Master of Science (MSc.) Eindhoven University of technology.**
Masters degree in Electrical Engineering completed in the Video Coding and Architectures Research Group.

2010 – 2015 **Bachelor of Science (BSc.). Eindhoven University of technology.**
Bachelors degree in Electrical Engineering and Innovation Sciences.

2004 – 2010 **High school diploma (VWO). Sondervick College.**
Science profile (Natuur en Techniek)

Experience

Vocational

2017 - present
Real time Barrett's cancer classification

PhD Candidate. Eindhoven University of technology.
The goal of my PhD research is to create a real-time system to detect cancer in the Barrett's esophagus in the clinic using deep learning and other machine learning techniques.
Main achievements:

- Collection and curation of a large-scale unlabeled dataset used to increase the performance of the final algorithm.
- Development of a deep learning framework which outperformed 53 medical experts in the lab.
- Successfully deployed and tested the developed algorithm live in the clinic with excellent performance.
- 11 journal papers of which 5 as first author and 19 conference papers of which 8 as first author published within PhD term.
- Runner up for best poster award in the SPIE medical imaging conference.

Other achievements

Angiodysplasia detection

- Second place in the GIANA challenge for detection and localization of Angiodysplasia in wireless capsule endoscopy images.
- Book chapter for the GIANA book, summarizing what happened in the last 2 challenges.

AI in Oesophageal cancer

- Book chapter "AIM in Oesophageal Cancer" for the Artificial Intelligence in Medicine book.

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Miscellaneous

2016 – 2017
Pancreatic Cancer Detection

Master Thesis. Eindhoven University of technology.
My Master thesis revolved around analyzing CT scans using image analysis and classification techniques to determine resectability of patients with pancreatic cancer. The results of this feasibility study could help many patients by preventing unnecessary invasive surgery.

2016
Road detection

Internship. Eindhoven University of technology.
In this internship I analyzed and worked on a road detection algorithm. Self driving cars will likely outperform human drivers in the very near future, road detection is a big part of that solution.

2015
Photophletysmogram signal processing

Internship. Philips research, Eindhoven.
During this internship I researched the effects of cuff pressure on a photophletysmogram sensor. Current blood pressure measurement methods are not continuous. This research attempted to use a photophletysmogram in combination with a finger cuff to allow for continuous blood pressure measurement.

2014
Computer vision

Bachelor project. Eindhoven University of Technology.
During this project I worked on a self balancing robot that used a color coded dancefloor to execute 'dance' moves.

Skills

Languages

Dutch	Native	*C2 on CEFR scale*
English	Fluent	*C2 on CEFR scale*

Expertise

Programming
Excellent knowledge of Matlab, Python and Latex. Basic knowledge of C and C++.

Office
Good knowledge of Word, PowerPoint, Outlook and Excel.

Adobe
Intermediate knowledge of Audition and Photoshop.

Machine learning and Computer vision
● Computer-aided diagnosis/detection, ● Medical image analysis, ● Deep learning, ● Video and image processing, ● Pytorch.

Teaching

Co-lecturer
Convolutional neural networks for computer vision (5LSM0)
Responsibilities: ● Teach several modules, ● Create and assist with practical exercises and instructions.

Co-lecturer
Enabling Technologies for Sports (5XSF0)
Responsibilities: ● Teach several modules, ● Assist with practical exercises and instructions, ● Grade exam exercises.

Assistant
Introduction to medical image processing (5XSA0)
Responsibilities: ● Grade exam exercises

Assistant
Image analysis for health-care technologies (5LSJ0)
Responsibilities: ● Grade exam exercises