MARYSIA WINKELS

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EDUCATION

2014 – 2018 · **MSc. Artificial Intelligence** · UNIVERSITY OF AMSTERDAM
Thesis subject: Data-efficient deep learning on biomedical image data. Supervised by Taco Cohen and Max Welling.

2011 – 2014 · **BSc. Artificial Intelligence** · UNIVERSITY OF AMSTERDAM
Thesis subject: Fair division and resource allocation. Supervised by Ulle Endriss.

WORK EXPERIENCE

AIDENCE

Aug. 2016 – present · **Junior Machine Learning Engineer**
Aidence provides a radically new approach to computer assisted diagnosis for radiologists by utilising deep learning methods for pathology recognition. Responsibilities include extraction of semantic labels on radiological reports, development and improvement of the deep learning models and the back-end infrastructure, aiding the creation of a certified development process, and research related to client integration.

INTERNSHIPS

AIDENCE

Apr. 2016 – Jul. 2016 · **AI & Data Engineer Intern**
Three month data engineer internship. The aim was to set up an inference pipeline for a new application. This included automatic parsing of the radiology reports to extract labels, analysing and preprocessing the 3D volumetric image data, and initial steps in implementing current state-of-the-art deep learning techniques for segmentation and classification.

MICROSOFT NL

Okt. 2015 – Jan. 2016 · **Data Science Intern**
Four month data science internship. Worked on an internal project as part of the data scientist team, and aimed to leverage available data to generate consistently better scoring marketing strategies for the Enterprise Marketing division. PROJECT: *Predictive Analytics in Enterprise Marketing.*

TEACHING EXPERIENCE

VRIJE UNIVERSITEIT AMSTERDAM

Feb. 2016 – Apr. 2016 · **Teaching Assistant**
Teaching Assistant for the Machine Learning course for third year BSc Lifestyle Informatics and BSc Business Analytics students at the Vrije Universiteit Amsterdam.

Universiteit van Amsterdam

Sep. 2013 – Jul. 2015 · **Tutor & Mentor**
Personal mentor and tutor Basic Academic Skills on a weekly basis for the first and second year students of the BSc Information Studies.

Universiteit van Amsterdam

Mar. 2013 – Jul. 2015 · **Teaching Assistant**
Teaching Assistant for various second year BSc Artificial Intelligence courses in academic year 2014/2015, and some first year BSc AI & Information Studies courses in academic year 2013/2014. Courses: *Natural Language Models & Interfaces* · *Computer Vision* · *Calculus & Statistics* · *Webprogramming & Databases* · *Knowledge Systems* · *Introduction Cognitive Psychology*

EXTRACURRICULAR ACTIVITIES

2018 – present · **Co-chair PyData Amsterdam**
We organise the three-day PyData conference in Amsterdam in close collaboration NUMfocus, with novice to advanced level presentations for approximately 350 attendees. In addition, we regularly organise meet-ups for audiences of 75-150 people, with speakers from industry and academia.

2013 – present · **Workshops**
Involved with various activities aimed at promoting exact sciences, especially computer science and artificial intelligence, through workshops to children and teenagers for *Lyceo CodeLabs, VHTO Spiegelbeeld* and *Project Outreach*.

2013 – 2014 · **BetaBreak**
BetaBreak is an initiative at the University of Amsterdam's Faculty of Science that organises monthly debates between experts about scientific subjects that have recently gained recognition through the news. As a committee member, I was involved with contacting potential expert individuals, setting up the debate questions, and occasionally leading the discussion. I especially contributed to the computer science/technology-centered debates.

PUBLICATIONS

M. Winkels & T. S. Cohen, Pulmonary Nodule Detection with 3D G-CNNs. *Medical Image Analysis Journal*, 2019.

M. Winkels & T. S. Cohen, 3D Group-Equivariant Neural Networks for Octahedral and Square Prism Symmetry Groups. *ICML*, 2018. *Accepted for an oral presentation.*

M. Winkels, T. S. Cohen, M. Welling. 3D G-CNNs for Pulmonary Nodule Detection. *MIDL*, 2018. *Accepted for an oral presentation.*

M. Winkels *et al.* Challenge balancing for a kanji e-tutoring system. *BNAIC*, 2018. *Accepted for an oral presentation.*

January 30, 2019