LINDE HESSE

EDUCATION

DPhil in Engineering Oct. 2019 - present
University of Oxford *Oxford, UK*

DPhil in Engineering focusing on the development of deep-learning methods to analyse the fetal brain during gestation from 3D ultrasound volumes.
Supervisor: Dr. A.I.L. Namburete

MSc in Medical Engineering Sept. 2016 - June 2019
University of Technology Eindhoven (TUE) *Eindhoven, NL*

Dissertation: Primary tumor origin classification of lung nodules in spectral CT using transfer learning.

Exchange Biomedical Engineering Feb. 2018 - July 2018
Instituto Superior Tecnico Lisboa *Lisbon, PT*
Extracurricular exchange semester

Bachelor Biomedical Engineering Sept. 2013 - Aug. 2016
University of Technology Eindhoven *Eindhoven, NL*

RESEARCH EXPERIENCE

Research Intern Deep Learning Feb. 2019 - June 2019
Martel Lab, Sunnybrook Research Centre, University of Toronto *Toronto, CA*
Supervisors: Prof. Dr. A. Martel and Dr. M. Veta

Graduate Intern June 2018 - Jan. 2019
Image Sciences Institute, University Medical Center Utrecht *Utrecht, NL*
Supervisors: Dr. V. Cheplygina, Prof. Dr. J.P.W. Pluim and Prof. Dr. P.A. de Jong

Research Intern Image Analysis Sept. - Nov. 2017
Verbeeten Institute *Tilburg, NL*
Supervisor: Dr. M. de Smet

TEACHING EXPERIENCE

GirlsWhoML March 2021 - Present
Class Lead and Content Creator
GirlsWhoML is an initiative to provide women interested in machine learning with an online introductory course into machine learning.

Department of Computer Science, University of Oxford Nov. 2020
Course Demonstrator *Oxford, UK*

Deep Learning and Machine Learning Course, which is part of the doctoral training program at the Department of Computer Science.

Department of Biomedical Engineering, TUE Sept. 2015 - Oct. 2018
Course Demonstrator *Eindhoven, NL*

Courses: Design (BSc), Human Metabolism (BSc) and Medical Image Analysis (MSc)

OTHER ACTIVITIES

Oxford Women in Computer Science

President *June 2021 - Present*

In the Oxford Women in Computer Science Society (OxWoCS) we aim to support and promote women working in computer science by organising a large number of events throughout the academic year. As President I am responsible for overseeing all activities as well as maintaining contact with our sponsors and the Department of Computer Science.

Seminar Organiser *June 2020 - June 2021*

As seminar organiser I have organised two seminars per term where we invited established female researchers to talk about their research.

AthenaStudies Eindhoven Sept. 2015 - Nov. 2016

Department Manager *Eindhoven, NL*

Responsible for organising additional tutoring classes at the Department of Biomedical Engineering to help students prepare for their BSc exams.

Pre-University College, TUE Sept. 2014 - March 2016

Workshop organiser *Eindhoven, NL*

Organised weekly outreach workshops for high school students in order to get them acquainted with technology and show them the possibilities of doing an engineering degree.

SKILLS

Languages	Dutch (native), German (native), English (fluent)
Coding Languages	Python, Matlab and C++

PUBLICATIONS

[3] **L. S. Hesse***, M. K. Wyburd*, M. Aliasi, M. C. Haak, A. T. Papageorghiou, and A. I. Namburete. Automated grading of healthy fetal cortical development using age prediction in 3D ultrasound. In *Perinatal, Preterm and Paediatric Image Analysis (PIPPI), satellite event of Medical Image Computing and Computer Assisted Intervention society (MICCAI)*, 2021 **accepted for oral presentation**

[1] **L. S. Hesse**, G. Kuling, M. Veta, and A. L. Martel. Intensity augmentation to improve generalizability of breast segmentation across different mri scan protocols. *IEEE Transactions on Biomedical Engineering*, 68(3):759–770, 2020 (link)

[2] **L. S. Hesse** and A. I. Namburete. Improving u-net segmentation with active contour based label correction. In *Annual Conference on Medical Image Understanding and Analysis*, pages 69–81. Springer, 2020 (link)

CONFERENCE ABSTRACTS

[4] **L. S. Hesse***, M. K. Wyburd*, M. Aliasi, F. Moser, M. C. Haak, A. T. Papageorghiou, I. 21st Consortium, and A. I. Namburete. Automated grading of fetal cortical development using deep-learning algorithms: a preliminary 3D ultrasound study in healthy fetuses. In *International Society of Ultrasound in Obstetrics & Gynecology (ISUOG)*, 2021 **accepted for oral presentation**

[3] **L. S. Hesse**, M. Aliasi, A. T. Papageorghiou, M. C. Haak, W. Xie, M. Jenkinson, and A. I. Namburete. Few-shot subcortical brain structure segmentation in 3D fetal brain ultrasound. In *Organisation for Human Brain Mapping (OHBM)*, 2021 **accepted for poster presentation**

* indicates equal contribution