MICHIEL KLEINNIJENHUIS

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ABOUT

Data scientist with a background in 3D image analysis. I have ample experience in developing methods to translate raw data into clear answers by combining components and integrating deep learning techniques. Python coding, creative analyses, visualising big data are strong points. I love putting my skills to use in solving societal issues.

RELEVANT SKILLS

Python, C/C++, Git, Matlab, Unix scripting, HPC
big data, machine learning, data stewardship, modelling, visualisation
commitment, flexibility, problem-solving, collaboration
Dutch, English, German (basic), Spanish (basic)

EXPERIENCE

2019 – 2022 **Princess Maximá Center for pediatric oncology** Utrecht (NL)

Computational scientist

- Developing 3D microscopy analysis methods.
  Keywords: deep learning, big data, distributed computing
- Leading the small group of bioinfomaticians of the microscopy group.

2013 – 2018 **University of Oxford** Oxford (UK)

Postdoctoral researcher

- Researching brain plasticity using MRI and electron microscopy.
  Keywords: python, HPC, MCMC modelling
- Teaching FMRIB graduate course on MRI physics and analysis techniques.

2009 – 2013 **Donders institute** Nijmegen (NL)

PhD candidate

- Creating approaches in anatomical brain imaging for mapping structural brain networks.
  Keywords: diffusion MRI, tractography, white matter dissection
- Giving classes and practicals in brain anatomy (including course development).

2008 – 2009 **NXP Semiconductors** Nijmegen (NL)

Reliability engineer

- Finding the root cause of an issue arising upon changing production plant of integrated circuits.
  Keywords: passivation cracks, pattern shift, temperature cycling
- Coordinating the various divisions involved in the research.

2006 – 2007 **Brainquiry R & D** Nijmegen (NL)

Researcher in applied psychophysiology

- Developing methods for physiological measurements in the context of sports and neurofeedback.
  Keywords: portable EEG, wearables, LabView
- Coding software for neurofeedbacktherapy.

EDUCATION

2014 **PhD Donders Graduate School for Cognitive Neuroscience**

Radboud University Nijmegen Nijmegen (NL)

- Thesis: "Imaging fibers in the brain"
- Advisors: Prof Dirk J. Ruiter and Prof David G. Norris

2007 **MSc Cognitive Neuroscience**

Radboud University Nijmegen Nijmegen (NL)

- Thesis: "The development of a multipurpose biofeedback system."
- Adivors: Prof Jacques Duysens and Prof Stan (C.C.A.M) Gielen

2003 **BSc Technische Natuurkunde**

Saxion Hogeschool Enschede Enschede (NL)

- Thesis: "Hoge Definitie Encefalografie: de gevolgen van samplefrequentieverlaging"

SELECTED PUBLICATIONS

Links to full lists and full texts: papers – proceedings – chapters – patents – theses

van Ineveld, R. L.*, Kleinnijenhuis, M.*, …, Wehrens, E. J., & Rios, A. C. (2021). Revealing the spatio-phenotypic patterning of cells in healthy and tumor tissues with mLSR-3D and STAPL-3D. *Nature Biotechnology*, *39*(10), 1239–1245. https://doi.org/10.1038/s41587-021-00926-3 *co-first authors

Kleinnijenhuis, M., Zerbi, V., …, Barth, M., & van Cappellen van Walsum, A.-M. (2013). Layer-specific diffusion weighted imaging in human primary visual cortex in vitro. *Cortex*, *49*(9), 2569–2582. https://doi.org/10.1016/j.cortex.2012.11.015

INTERESTS

Running – Bootcamp – Travel – Photography – Food – Tech – Literature