JENS PETERSEN

https://jens.pe

ACADEMIC BACKGROUND

Jun. 2015 – present
PhD Candidate
Deep Generative Models for Brain Tumor Progression Modeling
German Cancer Research Center (DKFZ), Heidelberg, Germany
Heidelberg University, Heidelberg, Germany

Sep. 2013 – Nov. 2014
MSc Physics (Distinction, highest grade)
Path Length Distribution in Random Directed Acyclic Graphs
Focus on Computational Physics
Imperial College London, UK

Oct. 2009 – May 2013
BSc Physics (very good, highest grade)
*Performance Analysis of a Transceiver Chipset and Interference
Control for a Wireless Detector Readout at 60GHz*
Heidelberg University, Germany

Sep. 2011 – Jun. 2012
ERASMUS Student Exchange
Universidad Autónoma de Madrid, Spain

PROFESSIONAL EXPERIENCE

Jun. 2015 – present
Research Assistant
*Implementation of an infrastructure for automated image processing,
with easy deployment of deep learning models into clinical routine*
Department of Neuroradiology,
Heidelberg University Hospital, Heidelberg, Germany

May – Sep. 2013
Web Design & Development (Freelance)
Website for Event Management Startup

PROJECTS

Feb. 2018 – present
heidelberg.ai (Meetup & Lecture Series on AI)
Co-Organizer, > 1200 Members

Jul. 2017 –present
trixi (`https://github.com/MIC-DKFZ/trixi`)
Core Contributor, Experimentation Framework for PyTorch

May 2016 – present
OneSurgery (Augmented Reality for Minimally Invasive Surgery)
Core Developer & Co-Founder, won Best Business Case & Audience
Award at *Life Science meets IT* Hackathon in Heidelberg.
Subsequently secured ~ €1 million funding from
Ministry for Economic Affairs and Energy (BMWI), Germany

2$^{\text{nd}}$ – 3$^{\text{rd}}$ Oct. 2017
Swiss Legal Tech Hackathon Zurich
1$^{\text{st}}$ Prize, Mobile App for Inheritance Distribution

Apr. 2016 – Mar. 2017
Bildverarbeitung für die Medizin 2017
Largest German Conference on Medical Image Computing
Organized Scientific Program, Industry Sponsorships, Registration

Oct. 2009 – Jul. 2011
AIESEC e.V. (Local Committee Heidelberg)
Vice President of Incoming Exchange 2010/2011
Member of the Executive Board, Team Leader of 10
Sourced Internships for Foreign Students at Local Companies

Skill & Interests

Languages	German (native), English (fluent), Spanish (working proficiency)
Interests	Beach Volleyball, Gymnastics, Travel Photography, Graphic Design
Technical Skills	PyTorch (expert), Python (expert), C++ (intermediate), Adobe Photoshop, Illustrator, Premiere

Selected Publications

Peer-Reviewed Journals

The Lancet Oncology, 2019
"Automated quantitative tumor response assessment of MRI in neuro-oncology with artificial neural networks"
*P. Kickingereder, F. Isensee, I. Tursunova, **J. Petersen**, U. Neuberger, D. Bonekamp, G. Brugnara, M. Schell, T. Kessler, M. Foltyn, I. Harting, F. Sahm, M. Prager, M. Nowosielski, A. Wick, M. Nolden, A. Radbruch, J. Debus, H.-P. Schlemmer, S. Heiland, M. Platten, A. von Deimling, M. J. van den Bent, T. Gorlia, W. Wick, M. Bendszus, K. H. Maier-Hein*

Journal of Medical Imaging, 4(3), 2017
"Effective User Interaction in Online Interactive Semantic Segmentation of Glioblastoma Magnetic Resonance Imaging"
***J. Petersen**, M. Bendszus, J. Debus, S. Heiland, K. H. Maier-Hein*

Nature Scientific Reports, 6, 2016
"Virtual Raters for Reproducible and Objective Assessments in Radiology"
*J. Kleesiek, **J. Petersen**, M. Döring, K. H. Maier-Hein, U. Köthe, W. Wick, F. A. Hamprecht, M. Bendszus, A. Biller*

Conference Proceedings

MICCAI, 2019
"Deep Probabilistic Modeling of Glioma Growth"
***J. Petersen**, P. F. Jäger, F. Isensee, S. A. A. Kohl, W. Wick, J. Debus, S. Heiland, M. Bendszus, P. Kickingereder, K. H. Maier-Hein*

MICCAI, 2019
"Unsupervised Anomaly Localization using Variational Auto-Encoders"
*D. Zimmerer, F. Isensee, **J. Petersen**, S. A. A. Kohl, K. H. Maier-Hein*

NeurIPS Medical Imaging Workshop, 2018
"A Case for the Score: Identifying Image Anomalies using Variational Autoencoder Gradients"
*D. Zimmerer, **J. Petersen**, S. A. A. Kohl, K. H. Maier-Hein*

SPIE Medical Imaging, 2017
"Effective User Guidance in Online Interactive Semantic Segmentation"
***J. Petersen**, M. Bendszus, J. Debus, S. Heiland, K. H. Maier-Hein*

MICCAI IMIC Workshop, 2016
"A Software Application for Interactive Medical Image Segmentation with Active User Guidance"
***J. Petersen**, M. Bendszus, J. Debus, S. Heiland, K.H. Maier-Hein*

Competitions

Medical Segmentation Decathlon, 2018 (winning contribution)
"nnU-Net: Self-adapting Framework for U-Net-Based Medical Image Segmentation"
*F. Isensee, **J. Petersen**, A. Klein, D. Zimmerer, P. F. Jäger, S. Kohl, J. Wasserthal, G. Köhler, T. Norajitra, S. Wirkert, K. H. Maier-Hein*