

Susu Hu

susu.hu@outlook.com | 0049 152 57841966 | <https://susuhu.github.io/> | Dresden, Germany

EDUCATION

Dresden University of Technology, Germany	2019 - 2023
<i>Master of Science in Computational Modelling and Simulation</i>	GPA 2.1
<ul style="list-style-type: none">Relevant coursework includes machine learning, computer vision, stochastic and probabilities, statistics, data visualisationGranted with SECAI scholarship for excellent students in artificial intelligence	
Nanjing Agricultural University, China	2009 - 2013
<i>Bachelor of Science in Logistics Engineering</i>	GPA 3.2/4.0
<ul style="list-style-type: none">Relevant coursework includes computer science basics, natural science and engineering basicsGranted with merit student scholarship	

THESIS

Neural Fields Learning, National Center for Tumour Disease Dresden, Germany	Oct 2022 - May 2023
<ul style="list-style-type: none">Condition neural fields on latent vectors to better capture complex 3D shape for sparse and partial 3D reconstructionPrinciple component decomposition on latent vectors for non-rigid registration	

WORK EXPERIENCE

Research assistant, National Center for Tumour Disease Dresden, Germany	Oct 2022 - May 2023
<ul style="list-style-type: none">Weakly supervised medical image segmentation	
Working student, Fraunhofer IPA, Stuttgart, Germany	Apr 2022 - Sep 2022
<ul style="list-style-type: none">Automated 3D data acquisition and measurement from sensorsQuantified the advantages of diverse sampling over uncertainty sampling in active learning for image labellingCompared different one-shot object tracking methods	
Working student, Fraunhofer IPMS, Dresden, Germany	Aug 2021 - Feb 2022
<ul style="list-style-type: none">Explored different neural network architectures, topologies and precision levels to optimize the quantization from 32-bit floating points to 8-bit and lowerCompared the performance metrics and hardware resources utilized	
Working student, Robotron, Dresden, Germany	Jun 2021 - Feb 2022
<ul style="list-style-type: none">Backend machine learning software development for computer vision tasks for industrial quality controlResearched and evaluated state-of-the-art methods for given tasks and implemented with real-life dataset from customers and benchmarked results	
Project Management, Ford Motor Company, China	2016 - 2019
Supply Chain Specialist, BSH Home Appliance, China	2014 - 2016

PROJECTS

Gaussian processes and neural networks	Sep 2020 - Mar 2021
Dresden University of Technology	
<ul style="list-style-type: none">Studied Gaussian processes mathematical theories and implemented convolutional and non-convolutional Gaussian processes on image classification tasksExperimented with second derivative and first derivative optimization methods. Approximated posterior distribution via variational inference method (minimising KL-divergence) and exploited sparse Gaussian processes to improve computation efficiency.	
Tractography scientific visualisation	Apr 2020 - Sep 2020
Dresden University of Technology	
<ul style="list-style-type: none">Studied techniques of tractography and implemented scalar and spherical colour mapping on brain fiber tracts based on diffusion measurement of free water in the brain	

PUBLICATIONS

Layer Sensitivity Aware CNN Quantization for CIM Architectures
2022 International Conference on Soft Computing & Machine Intelligence

SKILLS

Python: PyTorch, OpenCV, open3D, Pandas, Keras, TensorFlow, scikit-learn, Huggingface, FastAPI, etc.
DevOps: Git, Linux, Docker, Microsoft Azure
Others: C/C++, blender, R, SQL

LANGUAGES

English - C1, German - A2, Chinese - native speaker