

# JONAS SCHULT

PhD Candidate in Computer Vision, RWTH Aachen University

📅 November 22, 1994 📍 Düren, Germany @ schult.jonas@gmail.com 🌐 jonasschult.github.io  
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## EDUCATION

PhD Candidate in 3D Computer Vision

**Computer Vision Chair at RWTH Aachen University**

📅 February 2020 – ongoing 📍 Aachen, Germany

- Machine Learning & Computer Vision Research for 3D visual scene understanding with emphasis on 3D semantic (instance) segmentation
- Teaching Assistant for Operating Systems (Summer 2020) and advanced topics of Computer Vision 2 (Winter 2020 – 2022)
  - Managing 24 student assistants, e.g. organization of exercise groups
  - Lecturing exercise classes for >800 students

Master in Computer Science – Grade: 1.2 (with distinction)

**RWTH Aachen University**

📅 October 2017 – January 2020 📍 Aachen, Germany

- Thesis (Grade 1.0): *DualConvNet – Euclidean and Geodesic Convolutions for 3D Semantic Segmentation on Meshes (CVPR'20 Oral)*
- Specializing in Machine Learning and Computer Vision
- Minor: Economics
- Erasmus exchange semester at the NTNU Trondheim, Norway

Bachelor in Computer Science – Grade: 1.6 (good)

**RWTH Aachen University**

📅 October 2013 – September 2016 📍 Aachen, Germany

- Thesis (Grade 1.0): *Clustering of Attributed and Evolving Graphs*
- Minor: Electrical Engineering

High School Diploma – Grade: 1.4 (very good)

**St. Ursula Gymnasium**

📅 August 2005 – April 2013 📍 Dorsten, Germany

- Intensive courses: Mathematics and Physics

## WORK EXPERIENCES

Student Research Assistant for 3D Scene Understanding

**Computer Vision Chair at RWTH Aachen University**

📅 September 2017 – September 2019 📍 Aachen, Germany

Semantic (Instance) Segmentation of 3D point clouds (Tensorflow/PyTorch)

Research Internship

**Department Sensorik und Fusion at Volkswagen Research**

📅 September 2016 – December 2016 📍 Wolfsburg, Germany

- Detection of trailers' coupling points in monocular images, including:
- Dataset generation and creation of a labelling tool
  - Development of deep convolutional neural networks (Python/Caffe)

Student Assistant for Full Stack Web Development

**Medien für die Lehre (MfL) at RWTH Aachen University**

📅 April 2015 – September 2016 📍 Aachen, Germany

Full Stack Web Development of Serious Games (PHP/Symfony, SQL, JS)

## AWARDS



**Inclusion on the Dean's List**

📅 October 2018 – October 2019

Granted to top 5% of best students



**Deutschlandstipendium**

📅 October 2017 – October 2019

Education fund of the RWTH Aachen



**Erasmus+ Scholarship**

📅 January 2017 – June 2017

Exchange semester in Norway

## VOLUNTARY WORK



**Reviewer for CV Conferences**

📅 2022 – ongoing

WACV ('23), CVPR ('23), ICCV ('23)



**BeBuddy Program**

📅 May 2015 – June 2016

Mentor for exchange students during their stay at RWTH Aachen



**Wohnheim Hainbuchenstraße e.V.**

📅 November 2017 – November 2019

Active member of the student rental service unit for the student dorm HBS

## LANGUAGES

German

English



## PROGRAMMING

Python

PyTorch

Keras

Caffe

Tensorflow

C/C++

Linux (Shell)

Web Development

Java

Git

## PERSONAL INTERESTS

Climbing & Bouldering

Running

Football

Guitar

Science & Physics

Hardware tinkering

# PUBLICATIONS

## Publications

- **Jonas Schult**, Francis Engelmann, Alexander Hermans, Or Litany, Siyu Tang, and Bastian Leibe (2023). "Mask3D for 3D Semantic Instance Segmentation". In: *International Conference on Robotics and Automation (ICRA)*.
- Karim Abou Zeid\*, **Jonas Schult**\*, Alexander Hermans, and Bastian Leibe (2023). "Point2Vec for Self-Supervised Representation Learning on Point Clouds". In: *arXiv:2303.16570*.
- Yue, Yuanwen, Sabarinath Mahadevan, **Jonas Schult**, Francis Engelmann, Bastian Leibe, Konrad Schindler, and Theodora Kontogianni (2023). "AG-ILE3D: Attention Guided Interactive Multi-object 3D Segmentation". In: *arXiv:2306.00977*.
- Ayça Takmaz\*, **Jonas Schult**\*, Irem Kaftan, Mertcan Akçay, Bastian Leibe, Robert Sumner, Francis Engelmann, and Siyu Tang (2022). "3D Segmentation of Humans in Point Clouds with Synthetic Data". In: *arXiv:2212.00786*.
- **Jonas Schult**, Alexander Hermans, Francis Engelmann, Otmar Hilliges, Siyu Tang, and Bastian Leibe (2022). "M2F3D: Mask2Former for 3D Instance Segmentation". In: *IEEE Conference on Computer Vision and Pattern Recognition, T4V Workshop (CVPR) (Spotlight)*.
- Alexey Nekrasov\*, **Jonas Schult**\*, Or Litany, Bastian Leibe, and Francis Engelmann (2021). "Mix3D: Out-of-Context Data Augmentation for 3D Scenes". In: *International Conference on 3D Vision (3DV) (Oral Presentation)*.
- **Jonas Schult**\*, Francis Engelmann\*, Theodora Kontogianni, and Bastian Leibe (2020). "DualConvMesh-Net: Joint Geodesic and Euclidean Convolutions on 3D Meshes". In: *IEEE Conference on Computer Vision and Pattern Recognition (CVPR) (Oral Presentation)*.
- Francis Engelmann, Theodora Kontogianni, **Jonas Schult**, and Bastian Leibe (2018). "Know What Your Neighbors Do: 3D Semantic Segmentation of Point Clouds". In: *IEEE European Conference on Computer Vision, GMDL Workshop (ECCV)*.
- Schomerus, Volker, Jonas Konrad, **Jonas Schult**, Marcel Holdegel, and Mikael Johansson (2018). "Fahrzeugumfeldwahrnehmung für automatische Fahrfunktionen mit Convolutional Neural Networks". In: *Automatisiertes und vernetztes Fahren (AAET)*.



June 2, 2023

# REFEREES

**Prof. Dr. Bastian Leibe**

Doctoral Advisor

@ Computer Vision Chair, RWTH

✉ leibe@vision.rwth-aachen.de

**Dr. Francis Engelmann**

Colleague and Master Thesis Supervisor

@ ETH AI Center

✉ francis.engelmann@ai.ethz.ch

**Dr. Volker Schomerus**

Internship Supervisor

@ Volkswagen Research

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