JONAS SCHULT

PhD Candidate in Computer Vision, RWTH Aachen University

📅 November 22, 1994 📍 Düren, Germany @ schult.jonas@gmail.com 🔗 jonasschult.github.io
in linkedin.com/in/jonas-schult ⚲ github.com/JonasSchult

Research Interests: 3D Computer Vision ● 3D Semantic Scene Understanding ● 3D Generative AI ● Spatial AI

EDUCATION

PhD Candidate in 3D Computer Vision
Computer Vision Chair at RWTH Aachen University

📅 Feb 2020 – Summer 2024 (expected) 📍 Aachen, Germany

- Machine Learning & Computer Vision Research for 3D visual scene understanding with emphasis on 3D semantic (instance) segmentation
- Supervised 6 master students, leading to 3 conference papers
- Teaching Assistant for Operating Systems (Summer 2020) and advanced topics of Computer Vision 2 (Winter 2020 – 2022)

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

📅 October 2017 – January 2020 📍 Aachen, Germany

- Thesis (Grade 1.0): *DualConvNet (CVPR'20 Oral)*
- Specializing in Machine Learning & 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

WORK EXPERIENCES

Research Scientist Intern for 3D Generative AI
Meta

📅 June 2023 – November 2023 📍 Menlo Park, CA, USA

Project: 3D Room Generation using 2D Latent Diffusion Models

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 for 2D Object Detection
Volkswagen Group Research

📅 September 2016 – December 2016 📍 Wolfsburg, Germany

Computer Vision Research in 2D object and keypoint detection

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

🏠 **Wohnheim Hainbuchenstraße e.V.**
📅 November 2017 – November 2019
Active member of the student rental service unit for the student dorm HBS

🌐 **BeBuddy Program**
📅 May 2015 – June 2016
Mentor for exchange students during their stay at RWTH Aachen

ACADEMIC SERVICES

🎓 **Reviewer for CV Conferences**
📅 2022 – ongoing
CVPR ('23,'24), ICCV ('23), WACV ('23)

👥 **Workshop Co-Organizer**
📅 2023 – ongoing
OpenSUN3D at ICCV'23, CVPR'24

LANGUAGES

German ●●●●●
English ●●●●○

PROGRAMMING

Python | PyTorch | Keras | Caffe
Tensorflow | C/C++ | Linux (Shell)
WebDev | Java | Git | AWS

PUBLICATIONS

👥 Publications

- Kadir Yilmaz, **Jonas Schult**, Alexey Nekrasov, and Bastian Leibe (2024). "MASK4D: Mask Transformer for 4D Panoptic Segmentation". In: *International Conference on Robotics and Automation (ICRA)*.

- Yuanwen Yue, Sabarinath Mahadevan, **Jonas Schult**, Francis Engelmann, Bastian Leibe, Konrad Schindler, and Theodora Kontogianni (2024). "AGILE3D: Attention Guided Interactive Multi-object 3D Segmentation". In: *International Conference on Learning Representations (ICLR)*.

- Ayça Takmaz*, **Jonas Schult***, Irem Kaftan, Mertcan Akçay, Bastian Leibe, Robert Sumner, Francis Engelmann, and Siyu Tang (2023). "3D Segmentation of Humans in Point Clouds with Synthetic Data". In: *International Conference on Computer Vision (ICCV)*.

- **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)*.

- **Jonas Schult**, Sam Tsai, Lukas Höllein, Bichen Wu, Jialiang Wang, Chih-Yao Ma, Kunpeng Li, Xiaofang Wang, Felix Wimbauer, Zijian He, Peizhao Zhang, Bastian Leibe, Peter Vajda, and Ji Hou (2023). "ControlRoom3D: Room Generation using Semantic Proxy Rooms". In: *arXiv:2312.05208*.

- Karim Abou Zeid*, **Jonas Schult***, Alexander Hermans, and Bastian Leibe (2023). "Point2Vec for Self-Supervised Representation Learning on Point Clouds". In: *DAGM German Conference on Pattern Recognition (GCPR)*.

- **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)*.

- Volker Schomerus, Jonas Konrad, **Jonas Schult**, Marcel Holdegel, and Mikael Johansson (2018). "Fahrzeugumfeldwahrnehmung für automatische Fahrfunktionen mit Convolutional Neural Networks". In: *Automatisiertes und vernetztes Fahren (AAET)*.

February 13, 2024

REFEREES

Prof. Dr. Bastian Leibe
Doctoral Advisor
@ Computer Vision Chair, RWTH
✉ leibe@vision.rwth-aachen.de

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Dr. Francis Engelmann
Colleague and Master Thesis Supervisor
@ ETH AI Center
✉ francis.engelmann@ai.ethz.ch

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Dr. Volker Schomerus
Internship Supervisor
@ Volkswagen Research
✉ volker.patricio.schomerus –
@volkswagen.de