

István Sárándi, M.Sc.

PhD Candidate in Computer Vision and Machine Learning

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EDUCATION

- **Ph.D. Computer Science** RWTH Aachen University, Germany (Apr 2017–present)
Advised by Prof. Dr. Bastian Leibe at the Visual Computing Institute
Topic: *Deep Learning-Based Analysis of Humans by Robots* (current focus on 3D human pose estimation)
- **M.Sc. Computer Science** RWTH Aachen University, Germany (Oct 2012–Mar 2016)
Final grade: Excellent with distinction
Specializing in medical image processing, computer vision and machine learning
Thesis: *Pedestrian Line Counting using Probabilistic Combination of Flow and Appearance Information*
- **B.Sc. Computer Engineering** Budapest Univ. of Technology, Hungary (Sep 2008–Jan 2012)
German-language B.Sc. program, incl. exchange semester at the Karlsruhe Institute of Technology (WS2010)
Final grade: Excellent with highest honors
Thesis: *Design of a System to Support Medical Coding* (classification of free-text medical diagnoses)

WORK EXPERIENCE

- **Research and Teaching Assistant** RWTH Aachen University, Germany (Apr 2017–present)
 - **Teaching** experience in preparing assignments, exams, holding tutorial sessions, etc.
 - Computer Vision (SS2019, SS2020 with 500+ students)
 - Introduction to Computer Science for non-CS Students (WS2017)
 - Seminar Computer Vision and Machine Learning (SS18, SS19, WS19, SS20, WS20)
 - **Supervision** of 3 master theses and several student assistants
 - **Systems administration** of the research group's GPU cluster and server infrastructure
- **Student Research Assistant** RWTH Aachen University, Germany (Nov 2013–Oct 2014)
Pedestrian crowd density estimation and movement analysis in images and video (C++, MATLAB)
- **Student Research Assistant** University Hospital Aachen, Germany (Dec 2012–Oct 2013)
Medical image processing: allergic eye redness measurement, color calibration for wound imaging (Java)
- **Software Engineering Intern** Karlsruhe Institute of Technology (KIT) (July 2011)
Medical image processing: 3D blood vessel visualization in volumetric CT scans (C++)

HONORS AND AWARDS

- **Best 3D Pose Estimation Method** ECCV 3D Poses in the Wild Challenge (Aug 2020)
- **Best 3D Pose Estimation Method** ECCV PoseTrack Challenge (Sep 2018)
- **Springorum Commemorative Coin** proRWTH Foundation (Sep 2016)
- **Scholarship for Exchange Semester** DAAD (Oct 2010–Feb 2011)
- **Scholarship for Internship** DAAD (July 2011)

TECH SKILLS

- **Programming languages:** proficient in Python; extensive experience with C++, MATLAB, Java
- **Libraries:** extensive knowledge of TensorFlow, NumPy and OpenCV
- Experience in Linux-based development and systems administration

LANGUAGES

- **English:** Proficient (C2 level, IELTS 8.5/9, 2012)
- **German:** Proficient (C2 level, Goethe ZOP, 2011)
- **Hungarian:** Native speaker

FURTHER QUALIFICATIONS

- Driver's license (category B)

COMMUNITY PARTICIPATION

- Reviewer for CVPR, ECCV, ICRA, BMVC, TVCJ
- Participation in the International Computer Vision Summer School (ICVSS) of 2014 and 2018

PUBLICATIONS

- **Sáráandi, I.**; Linder, T.; Arras, K. O.; Leibe, B. (in press). *MeTRAbs: Metric-Scale Truncation-Robust Heatmaps for Absolute 3D Human Pose Estimation*. In IEEE Trans Biometrics, Behavior, and Identity Science (T-BIOM), Selected Best Works From Automated Face and Gesture Recognition (FG) 2020
- Knoche, M.; **Sáráandi, I.**; Leibe, B. (2020). *Reposing Humans by Warping 3D Features*. In CVPR Workshop Towards Human-Centric Image/Video Synthesis
- **Sáráandi, I.**; Linder, T.; Arras, K. O.; Leibe, B. (2020). *Metric-Scale Truncation-Robust Heatmaps for 3D Human Pose Estimation*. In IEEE Int Conf Automatic Face and Gesture Recognition (FG)
- Pfeiffer, K.; Hermans, A.; **Sáráandi, I.**; Weber, M.; Leibe, B. (2019). *Visual Person Understanding through Multi-Task and Multi-Dataset Learning*. In German Conf Pattern Recognition (GCPR)
- **Sáráandi, I.**; Linder, T.; Arras, K. O.; Leibe, B. (2018). *Synthetic Occlusion Augmentation with Volumetric Heatmaps for the 2018 ECCV PoseTrack Challenge on 3D Human Pose Estimation*. arXiv:1809.04987
- **Sáráandi, I.**; Linder, T.; Arras, K. O.; Leibe, B. (2018). *How Robust is 3D Human Pose Estimation to Occlusion?* In IROS Workshop on Robotic Co-Workers 4.0. arXiv:1808.09316
- **Sáráandi, I.**; Claßen, D. P.; Astvatsatourov, A.; Pfaar, O.; Klimek, L.; Mösges, R.; Deserno, T. M. (2014). *Quantitative Conjunctival Provocation Test for Controlled Clinical Trials*. In Methods of Information in Medicine, 53(4), 238-244
- Deserno, T. M.; **Sáráandi, I.**; Jose, A.; Haak, D.; Jonas, S.; Specht, P.; Brandenburg, V. (2014). *Towards Quantitative Assessment of Calciphylaxis*. In SPIE Medical Imaging 2014: Computer-Aided Diagnosis (Vol. 9035, p. 90353C)
- Bista, S. R.; **Sáráandi, I.**; Dogan, S.; Astvatsatourov, A.; Mösges, R.; Deserno, T. M. (2013). *Automatic Conjunctival Provocation Test Combining Hough Circle Transform and Self-Calibrated Color Measurements*. In SPIE Medical Imaging 2013: Computer-Aided Diagnosis (Vol. 8670, p. 86702J)
- **Sáráandi, I.**; Deserno, T. M.; Classen, D.; Pfaar, O.; Astvatsatourov, A.; Mösges, R. (2013). *Quantitative Conjunctival Provocation Test* (Meeting Abstract) In Proc. 58th Annual Meeting of the German Association for Medical Informatics, Biometry and Epidemiology (GMDS)