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Amirhossein Kardoost

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Websites: LinkedIn, **Personal Website**

Education

University of Mannheim
Ph.D., Computer Science, Mannheim, Germany, 2017 - 2022

Saarland University
M.Sci., Computer Science, Saarbrücken, Germany, 2013 - 2017

Institute for Advanced Studies in Basic Sciences (IASBS)
B.Eng., Information Technology, Zanjan, Iran, 2008 - 2012

Research Interests

Machine Learning and Pattern Recognition
Image Analysis and Computer Vision
Video Object and Motion Segmentation
Alignment of Electron Microscopy Images

Work Experience

Software Developer
European XFEL, Schenefeld, Germany
February.2021 - Now

Research Assistant Experience

Estimation of Texture Orientation
Fraunhofer Institute for Nondestructive Testing **(IZFP)**
Saarbrücken, Germany
January.2015 - December.2015

Mobia Project
German Research Center for Artificial Intelligence **(DFKI)**
Saarbrücken, Germany
January.2014 - December.2014

3D Reconstruction of Visual Information
Max-Planck-Institute for Informatics **(MPI)**
Saarbrücken, Germany
May.2013 - February.2014

Theses

Ph.D.'s Thesis
Video Object and Motion Segmentation
Projects Implemented in **C++, CUDA, MATLAB, Python, and PyTorch**

Master's Thesis
Alignment of Tilt-Series by Non-Convex Optimization
Implemented in **C++**

Bachelor's Thesis
Machine vision - Detection and Recognition of Face with **OpenCV** Library
Implemented in **C++**

Publications

[1] Higher-Order Multicuts for Geometric Model Fitting
and Motion Segmentation
Evgeny Levinkov*, **Amirhossein Kardoost***, Bjoern Andres, Margret Keuper
TPAMI Journal 2022

[2] Solving Minimum Cost Lifted Multicut Problems by Node Agglomeration
Amirhossein Kardoost and Margret Keuper
ACCV 2018
Project Website

[3] Object Segmentation Tracking from Generic Video Cues
Amirhossein Kardoost, Sabine Müller, Joachim Weickert, Margret Keuper
ICPR 2020
YouTube Link

[4] Self-supervised Sparse to Dense Motion Segmentation
Amirhossein Kardoost, Kalun Ho, Peter Ochs, Margret Keuper
ACCV 2020

[5] Uncertainty in Minimum Cost Multicuts for Image and Motion Segmentation
Amirhossein Kardoost and Margret Keuper
UAI 2021

[6] A Two-Stage Minimum Cost Multicut Approach to Self-Supervised
Multiple Person Tracking
Kalun Ho, **Amirhossein Kardoost**, Franz-Josef Pfreundt, Janis Keuper,
Margret Keuper
ACCV 2020

Paper Reviewer

CVPR 2021, 2022
ICCV 2021
AAAI 2021
BMVC 2020

Summer School

International Computer Vision Summer School **(ICVSS)**
July.2019, Sicily, Italy

Visiting Researcher

Max-Planck-Institute for Informatics **(MPI)**
Computer Vision Group
January.2019 - February.2019, Saarbrücken, Germany

Honors and Awards

Rank 2 in Computer Science Department of (IASBS)
(Among top 10% of Class)
Zanjan, Iran
May.2012

50% Tuition Scholarship from Tagliatela College of Engineering
Boston, USA
September.2012

Computer Skills

Machine Learning Libraries

- PyTorch,
- Keras,
- TensorFlow

Programming Languages

- C,
- C++,
- Python
- C#,
- MATLAB,

Web Developement

- HTML, CSS, Javascript, jQuery, EJS, Node.js

Database Management System

- MySQL
- PostgreSQL

Programming Libraries

- OpenCV,
- OpenGL

Language Skills

English (Fluent)
German (Intermediate)