

Arash Javanmardi (B.Sc.)

Email address: ajavanma@rptu.de | Website: <https://ajavanma.github.io/> | LinkedIn:

<https://www.linkedin.com/in/arash-javanmardi-9567b9167/> | Github: <https://github.com/ajavanma> | Gitlab:

<https://gitlab.rhrk.uni-kl.de/ajavanma> | Address: Kaiserslautern, Germany (Home)

● ABOUT ME

Languages: English, German, Farsi

● WORK EXPERIENCE

09/2021 – CURRENT Kaiserslautern, Germany

STUDENT, CONSTRUCTIONAL ENGINEERING (M.SC.) TECHNICAL UNIVERSITY OF KAISERSLAUTERN (RPTU)

Research assistant (HiWi)

Department: Reinforced Concrete, Civil Eng.

• Project: *HumanTech (HT)*

1. **Developer of RPTU AI Toolkit:**

- a. coding the entire data pipeline (preprocessing, training and inference) in **PyTorch**
- b. Designing a **state of the art neural network architecture** based on **Minkowski** engine with the goal of automation of digital twin generation based on Lidar scans

2. Supervision of **data preparation** (point clouds labelling):

- a. Project: Annotation rules and classes for semantic segmentation of point clouds for digitisation of existing buildings
- b. Project: Annotation rules and classes for semantic segmentation of point clouds for digitisation of existing bridge structures

3. **Teaching assistant** in "IT in civil engineering" course

1. Study Project #1: **3D-printed concrete from recycled materials** (joint project with Université de Lille)
2. Study Project #2: **Hierarchical Point Transformer (HPT)**: A hierarchical approach to use Transformers for semantic segmentation of point clouds

09/2022 – CURRENT Kaiserslautern

RESEARCH ASSISTANT (HIWI) AT DFKI GERMAN RESEARCH CENTER FOR ARTIFICIAL INTELLIGENCE KAISERSLAUTERN

Department: Augmented Vision (AV)

• Project: *HumanTech (HT)*

1. **Interpretation and implementation of IFC rules in annotation and providing examples for IFC Schema, enabling the preparation of a consistent dataset**

2. Data preparation for ground truth: **Annotation** of RGB-D images

2012 – 2021 Remote

WEB DEVELOPEMENT FREELANCER

1. **Backend web development** and **system administration** at a bitcoin exchange, serving more than 10k real world customers
- implemented **web sockets API** for real-time communication
- wrote a **script to automate the configuration modification** for better load balancing with **NGINX**, enhancing the responsiveness and reducing downtimes
2. Website design and setting up online shops for small businesses

● EDUCATION AND TRAINING

2015 Zahedan, Iran

CIVIL ENGINEERING, CIVIL (B.SC.) University of Sistan and Baluchestan

● DIGITAL SKILLS

Civil Engineering

Revit | STAB2D | AutoCAD | SAP2000 | Tekla Structures | eLCA | Etabs | Life Cycle Assessment (LCA) | SAFE | Therakles | WUFI | RIB iTWO

MS Office

VBA and Macro programming | MS Project | Excel

Data Science & Machine Learning

C++ | C# | Java | SQL | Python | Pytorch | Javascript (Node.js) | Unity | Blender | Git | Typescript | R | Cloud Compare (3D point cloud processing) | Bash

● ADDITIONAL INFORMATION

VOLUNTEERING

09/2021 – CURRENT

Volunteer Supervisor, Lebenshilfe Kaiserslautern mbH Care and education for individuals with disabilities

2016 – 2017

Military Service, Iranian Army Military Teaching Officer
Teaching English to army generals

KNOWLEDGE AND SKILLS

Knowledge of Civil Engineering principles and standards, Programming, and Machine Learning

1. Proficient in computer programming and server administration (C++, C#, Java, SQL, VBA, Python, Bash, Javascript, Node.js, Typescript, PyTorch, Git, Cloud Compare, Blender, Unity, Docker)
2. Solid knowledge and practical experience in machine learning, computer vision and image processing
3. Data visualisation (R)

HONOURS AND AWARDS

Machine Learning with Python – freeCodeCamp

Link <https://freecodecamp.org/certification/Javanmardi/machine-learning-with-python-v7>

Data Analysis with Python – freeCodeCamp

Link <https://freecodecamp.org/certification/Javanmardi/data-analysis-with-python-v7>

Javascript Algorithms and Data Structures – freeCodeCamp

Link <https://freecodecamp.org/certification/Javanmardi/javascript-algorithms-and-data-structures>

Scientific Computing With Python – freeCodeCamp

Link <https://www.freecodecamp.org/certification/Javanmardi/scientific-computing-with-python-v7>

Responsive Web Design – freeCodeCamp

Link <https://www.freecodecamp.org/certification/Javanmardi/responsive-web-design>

Data Visualization – freeCodeCamp

Link <https://www.freecodecamp.org/certification/Javanmardi/data-visualization>