

Arash Javanmardi (B.Sc.)

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

● WORK EXPERIENCE

09/2021 – CURRENT Kaiserslautern, Germany

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

Research Assistant (HiWi) in the department of Reinforced Concrete, TU Kaiserslautern

1. Project: HumanTech (HT)
2. **Developer of RPTU AI Toolkit:** Data pipeline, ai model training, and automation of BIM model based on the trained ai model
3. Supervision of data preparation (Point Clouds labeling)
4. Study Project #1: **3D-printed concrete from recycled materials** (joint project with Université de Lille)
5. 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)

1. Project: HumanTech (HT)
2. **introduction and interpretation of IFC rules in annotation and setting the standard for preparation of a consistent dataset**
3. Data preparation for ground truth: **Annotation of RGB-D images**

2012 – 2021 Remote

WEB DEVELOPEMENT FREELANCE

1. Full-stack web development
2. System administration
3. Website design
4. Trading bots

2014 – 2021 Schiraz, Iran

PROCUREMNET OFFICER RJ TRADE (FAMILY BUSINESS)

1. Correspondence
2. Source identification/assessment
3. Calculation, invoicing, registration, and tax reporting

● EDUCATION AND TRAINING

2015 Zahedan, Iran

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

Study Projects:

1. Calculation and modeling of a 4-story reinforced concrete structure (Reinforced Concrete) (AutoCAD, ETABS, SAFE, Excel)

2. Calculation and modeling of a 6-story steel structure (Steel Structures) (AutoCAD, ETABS, SAFE, Excel)
3. Optimal and cost-effective road design between two specific cities based on the region's geodata (Road Construction) (QGIS, Excel)
4. Cost calculation of a private residence (Project Management) (Excel)
5. Design of an above-ground water supply network and an underground sewer and drainage system for a specific city based on its historical population growth rate (Infrastructure) (hand-drawn plans, Excel)

Address Zahedan, Iran

2014 Shiraz, Iran

PROJECT MANAGEMENT Sad & Omran ParsGostar Co.

Internship in the field of construction management at a bridge construction site

1. Review of detailed plans (AutoCAD)
2. Project management (MS Project)
3. Scheduling and cost management (MS Project & Excel)
4. Documentation of the processes

Address Nasr-Fazilat Bridge Construction Site, Shiraz, Iran | **Website** www.sopg.ir/en/home

2013 Shiraz, Iran

STRUCTURAL ANALYSIS Petrochemical Industries Design & Engineering Co. (PIDEC)

Internship in the field of computer-aided structural design

1. Review of project specifications, standards, and licenses
2. Coding of the Iranian "National Building Regulations" (1392) in ETABS in form of a self-programmed DLL (CSI oAPI)
3. Structural design for pipeline facilities (ETABS)
4. Design and finalizing the details for welding and bolted connections (Tekla Structures)

Address Eram Str., Shiraz, Iran | **Website** www.pidec.com/dev/en/PidecHome.aspx

● LANGUAGE SKILLS

Mother tongue(s): **FARSI**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C2	C1	C1	C2
GERMAN	C1	C1	C1	C1	C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● DIGITAL SKILLS

Computer Skills in Civil Engineering

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

Microsoft Office

MS Project | Spezialisiert in Excel, VBA und Macro Programmierung

Data Science & ML

Python | SQL | Tensorflow | Java | Tableau Data Visualization | R | PyTorch | Cloud Compare (3D point cloud processing) | Bash | Blender | Git | TypeScript | Javascript (Node.js) | C++

● 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. In-depth understanding in areas: Structural design, structural analysis, non-linear structural analysis, surface structures, shell structures, structural dynamics, seismic design, numerical analysis, finite element methods, pre-stressed concrete, concrete technology, efficient building and energy modeling, and BIM methodology.
2. Knowledge of European building regulations: Eurocodes, German Construction Contract Procedures (VOB/B), State Building Regulations of Rhineland-Palatinate (LBauO), and fire protection regulations.
3. Familiar with the basics of economics, construction management and project management.
4. Proficient in computer programming: Linux server management (Apache, NGINX), C++ (STL, Asio), Python, Bash, and virtual environments (Conda, Docker).
5. Solid knowledge and practical experience in ml, Computer Vision: Design and implementation of the entire training pipeline; supervised machine learning, semantic segmentation of point clouds and RGBD, CNN, optimization (Hyperparameter fine-tuning), model evaluation and iteration on it (W&B).
6. Data visualization: Tableau, Matplotlib, ggplot

HONOURS AND AWARDS

01/04/2023

Machine Learning with Python – freeCodeCamp Preprocessing · Linear Regression · Classification · CNN · TensorFlow · SciPy · Scikit-learn · Matplotlib

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

31/03/2023

Data Analysis with Python – freeCodeCamp Data Science · Data Visualization · NumPy · Pandas · SciPy

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

12/04/2023

Scientific Computing with Python – freeCodeCamp

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