

Curriculum vitæ

Address
Mobile
Email
Homepage

Expertise

Work Experiences

2021 – present

Dr.-Ing. Pouya Mohammadi

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https://pouya-moh.com



AI, machine learning, robotics, computer vision ■ Project management ■ Advanced analytics ■ System integration ■ Software architecture design and engineering

2015 – 2020

Machine Learning, Robotics and Data Science Consultant
Freelance (clients include major automotive parts manufacturer)

Research Fellow

Institut für Robotik und Prozessinformatik der TU Braunschweig
Robotics, AI and machine learning scientist and project/team leader

EU Project CMCI (Oct 2019 – Oct 2020)

Integrated technical project of RobMoSys

- *Responsible for all the technical and managerial activities of project partner:* successfully navigate the project according to **all KPIs and deliverables** despite Covid-19 challenges (staff shortage, lab access, travel restrictions)
- *Requirement & domain analysis, software engineer for optimization:* results formed one of the project's main technical pillars with **successful code generation and empirical results** (rosym-project.github.io/cmci)

EU Project CogIMon (2015 – 2019)

Large scale project with 8 consortium members from different countries

- *Actively involved in the coordination of the project:* overall evaluation of **“excellent progress”** by the European commission in 4 years of the project
- *Research track and work package leader:* one of the highlights of the project, **results are the basis of a proposal for a larger EU project**
- *Lead developers team member, co-maintainer of CI/CD (Jenkins+Dockers):* nightly builds with proper testing, **high adoption rate** within and outside of the consortium (cogimon.github.io ■ cogimon.eu)

2014 – 2015

Research Assistant

Automation & industrial management department, Sapienza University of Rome

- *AI & robotic assistant:* among other duties, created software **used in Italy, France and Germany** for teaching robotic concepts

2008 – 2010

Research and Development Engineer

Engineer at Eastcool Co., major producer of electric appliances, Iran

- *Prototyping and automation for production line:* e.g., automation of a coating line, **several years of reliable service** with no issues reported
- *Software developer:* directly working with and addressing requirements of **supply chain management and production line**

Education

PhD
2015 – 2019

Context Aware Body Regulation of Redundant Robots

Technische Universität Braunschweig, Germany

New paradigm in real-time safe control architecture design of intelligent systems

- Magna cum laude

Master of Science
2010 – 2013

Bachelor of Science
2005 – 2008

Technical Proficiency

AI, Machine Learning & ANN

Artificial Intelligence and Robotics

Engineering faculty, Sapienza University of Rome, Italy

– Total score 110/110

Computer Science

Faculty of Mathematics, Shahid Bahonar University of Kerman, Iran

– And associate degree in computer software

Software Dev. & Engineering

- Theoretical and practical knowledge with numerous libraries
- Strong background in probability theory and statistical analysis
- Familiar with deep-/ machine learning libraries (PyTorch, etc.)
- Evolutionary algorithms (e.g., GA, PSO, etc)
- Neural networks, Extreme learning machines, GANs, etc.
- Experienced with Power BI, data visualization, KNIME

Robotic

- Expertise in programming C++ and Java
- Jenkins, CI & CD, Version Control, Docker
- Experienced in several scripting languages including Python, Bash, Matlab
- Database systems, SQL
- Meta-programming systems and model-driven development
- Libraries (C++/Python) e.g., linear algebra, optimization, Bayesian filtering
- Designing software architecture for robot control, robot software life-cycle
- Expertise in ROS(2), OROCOS, and their assets
- Real-time safe control component development
- Dynamically consistent simulation

Interdisciplinary Skill

- Computer vision, OpenCV (C++/Python), visual servoing
- Familiar with micro controllers, PLCs and sensors
- LaTeX, report/document typesetting systems, MS office suite
- Amazon cloud (AWS)
- 3D CAD, Rapid Prototyping

Leadership/Mentoring

- *Supervising master's theses in robotics and ML at TU-Braunschweig: excellent results with publications and **industry prospect***
- *Team leader for 'open robotic lab': designed and implemented **one of the most stimulating hands-on activities** according to students' feedback*
- *TA for robotics and ML in TU Braunschweig and Uni Bielefeld: **great knowledge transfer skills** based on multiple evaluations by students*

Language Proficiency

English
Italian
German
Persian/Farsi

Fluent
Proficient in comprehension, listening and speaking of Italian
Hold B1 certificate from Uni Bielefeld, still learning
Mother tongue

Publications

List of publications is available at pouya-moh.com/publications

References

Prof. Dr. Jochen Steil

Chair and professor of machine learning and robotics,
Institut für Robotik und Prozessinformatik, TU Braunschweig
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Daniel Kubus

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