Mohammad Arjomandi Rad

PhD student in Product Development

Specialized in leveraging advanced technologies and methodologies, such as AI, Machine learning, and digital twin technology, to optimize the product development process. I've focused on the integration of data-driven tools in CAD/CAE, aiming to innovate and reduce lead times in design processes. I'm always keen to collaborate, learn, and share insights within the realm of product design and development.

Iranian **36-years old** **Driver License - B**

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📍 Karlsdalsallén 48A, lgh 1204, Örebro, Sweden

Interests

Machine vision, Artificial Neural Networks, Optimization, and Decision making, CAD/CAE Design Automation, Knowledge Base Engineering, System engineering

Languages

Persian . . . . Native language
English . . . . Full working proficiency – C1
Swedish . . . . Working proficiency - B2
Turkish . . . . Native language

Skills

Mechanical
Solid Works, CATIA, ABAQUS, LS-Dyna, ANSA/BETA, Fusion 360, and NX, Rhino

Programming
Python (Machine Learning and AI Libraries, Databases Image Processing, and Web Scrapping), Git knowledge, VB.net, VBA(Macro), MATLAB, Julia, Use of API's, Visual Programming (Grasshopper, Node-RED)

General
Outlook, MS-Office Suit, Linux environments, Presentation and Communication skills, Cloud Computing, Collaborative and Structured

Other
modeFRONTIER, Isight, Maple, JMP, LaTeX

References available upon request

"SHOULD YOU NEED FURTHER INFORMATION, DO NOT HESITATE TO CONTACT ME"

Work Experiences

Autoliv AB *Member of the research project 'Butterfly Effect'*
Worked with FEM automation for airbag volume simulation. Modeling FE results in Grasshopper. Built machine learning library with input from CAD and applied CNNs and SGD. Reduced design process lead time by creating image regression surrogate models. 2020-2022 | Vårgårda, Sweden

Poolad e Sorkh *Production floor engineer*
Designing and manufacturing industrial burner for the Brick kiln. Simulation, analysis, and manufacturing of injection molds. Worked with manufacturing machines. 2013-2016 | Tabriz, Iran

Azar Energy *Design engineer*
Analysis of equipment such as tower packing, column internals, and trays, Bubble caps for trays and tower rings, and other equipment parts with software ABAQUS. Used AutoCAD and SolidWorks for modeling mechanical components, prepared as-built drawings. 2012-2013 | Tabriz, Iran

Latest Education

Chalmers Tekniska Högskolan *Product development, PhD student*
Industrial and Material Science Departement
Supervisor and examiner: Dr. Massimo Panarotto and Prof. Ola Isaksson
08/2022-now | Stockholm, Sweden

Jönköping University *Licentiate degree, Machine Design*
Department of Industrial Product Development, Production and Design
Supervisor and examiner: Dr. Roland Stolt and Prof. Fredrik Elgh
2019-2022 | Stockholm, Sweden

Iran University of Science and Technology *M.Sc., Automotive Engineering*
Department of Automotive Engineering
2016-2018 | Tehran, Iran

Selected Publications

- **Arjomandi Rad, M.** and Salomonsson, K. Cenanovica, (2022) "Image regression-based digital qualification for simulation-driven design processes, case study on curtain airbag" *Journal of Engineering Design* https://doi.org/10.1080/09544828.2022.2164440
- **Arjomandi Rad, M.** and Salomonsson, K. Cenanovica, M. Balague, H. Raudberget, D. Stolt, R. (2022) "Correlation-based feature extraction from computer-aided design, case study on curtain airbags design" *Computers in Industry* https://doi.org/10.1016/j.compind.2022.103634
- Hosseini, S.M. **Arjomandi Rad, M.** Khalkhali, A. Saranjam, M.J. (2019) "Optimal design of the S-rails for an automotive platform with novel modifications on product-family optimization process" *Journal of thin-walled structures.* https://doi.org/10.1016/j.tws.2019.01.046
- **Mohammad Arjomandi Rad,** and Abolfazl Khalkhali. (2018) "Crashworthiness multi-objective optimization of the thin-walled tubes under probabilistic 3D oblique load" *Materials & Design.* https://doi.org/10.1016/j.matdes.2018.07.008

Teaching Experiences

- **Product planning and Product development** Chalmers Tekniska Högskolan
- **Data science in product realization** Chalmers Tekniska Högskolan
- **Computer programming for design automation** Jönköping University
- **Computer-supported engineering design Lab assistant** Jönköping University
- **Finite Element and Optimization course teaching assistant** Iran University of Science and Technology