

# Roshan Panahi

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 [RoshanPanahi](#)

 [RoshanPanahi2019](#)




 [RoshanPanahi2019.github.io](#)

## EDUCATION

Ph.D. Candidate, Construction Engineering and Management, Oregon State University, [Projects](#) 2019-2023  
M.Eng, Computer Science, Oregon State University, [Coursework](#) 2021-2022  
M.Sc, Construction Engineering, and Management, Iran University of Science and Technology 2018  
B. Sc, Geomatics, Tabriz University 2015

## WORK EXPERIENCE

 **Data Scientist Intern, Skanska** Sep. 2022-Present

- Cleaned, preprocessed, and analyzed 20k+ RFI data using Power-BI, MySQL, and Pandas
- Proposed, developed, and deployed an RFI recommender web application to reduce cost using NLP, Computer Vision, Chat-GPT API, and Flask 
- Cleaned, merged, preprocessed, binned, feature engineered, visualized, and tested correlation among causes of delay from 256 projects using Seaborn, Scikit-Learn and ML algorithms to answer questions related to project delay predictability 
- Analyzed 1k+ records of comments from field crew and developed models to classify the comments using Chi-Square test, bag of words, and random forest 
- Developed reports and dashboards in power-BI

 **Project Engineering Intern, Skanska** Jul. 2022-Sep. 2022

- Prepared meeting minutes, processed RFIs, prepared contracts

 **Research & Development Engineer, <https://aradcmpioneers.ir/>** 2016-2018

- Developed virtual and augmented reality experiences for maintenance and progress monitoring

 **Project Engineer, Arasharmeh Construction Management** 2015-2018

- Coordinated project activities
- Conducted site inspections
- Resolved project issues

## TECHNICAL SKILLS

**Programming Language:** [Python](#), MATLAB, R, SQL, [C++](#)

**Machine Learning Theory:** Linear Regression, Logistic Regression, Decision Trees, Random Forest, SVM, Neural Networks

**Machine Learning Tools:** [Pytorch](#), [NLTK](#), [CUDA](#), [OpenCV](#), SciKit-Learn, OpenCL

**Data Analysis:** Pandas, NumPy, SciPy, Matplotlib, [Seaborn](#)

**Data Visualization:** Power-BI, [Tableau](#)

**Web-Framework:** [Flask](#)

## RESEARCH PUBLICATIONS

- Roshan Panahi; Kivlin, J.; Louis, J., *Request for Information (RFI) Recommender System for Pre-Construction Design Review Application Using Natural Language Processing, Chat-GPT, and Computer Vision*, i3CE 2023, [Code Here](#), DOI: Forthcoming
- Roshan Panahi; Louis, J.; Aziere, N.; Podder, A.; Swanson, C., *Identifying Modular Construction Worker Tasks Using Computer Vision*, i3CE 2021, [Code Here](#), DOI: [10.1061/9780784483893.118](https://doi.org/10.1061/9780784483893.118)
- Roshan Panahi; Louis, J.; Podder, A.; Swanson, C., *Tracking Volumetric Units in Modular Factories for Automated Progress Monitoring Using Computer Vision*, Construction Research Congress 2022. [Code Here](#), DOI: [10.1061/9780784483961.086](https://doi.org/10.1061/9780784483961.086)
- Roshan Panahi; Louis, J.; Podder, A.; Swanson, C.; Pless, S., *Automated Progress Monitoring and Bottleneck Detection in Modular Construction Factories Using Computer Vision*, Sensors 2023, DOI: Forthcoming
- Roshan Panahi; Louis, J.; Podder, A.; Swanson, C.; Pless, S., *Automated Assembly Progress Monitoring in Modular Construction Factories Using Computer Vision-based Instance Segmentation*, i3CE 2023. [Code Here](#), DOI: Forthcoming
- Roshan Panahi; Louis, J.; Podder, A.; Swanson, C.; Pless, S., *Automated Progress Monitoring in Modular Construction Factories Using Computer Vision and Building Information Modeling*, ISARC 2023. DOI: Forthcoming
- Reviewer for the Journal of Advanced Engineering Informatics, and Construction Research Congress.