

Bahareh Alizadeh Kharazi

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EDUCATION

- Texas A&M University**, College Station, Texas May 2023
Doctor of Philosophy in Machine Learning Engineering
GPR: 4.0
- Sharif University of Technology**, Tehran, Iran July 2018
Master of Science in Construction Engineering and Management
GPR: 3.88
- Sharif University of Technology**, Tehran, Iran July 2015
Bachelor of Science in Civil Engineering
GPR: 3.37

EXPERIENCE

- Texas A&M University**, College Station, Texas January 2020 – Present
PhD Research and development (R&D)
- Ore than two years of research and development on a project entitled “A Hybrid Decision Support System for Driving Resiliency in Texas Coastal Communities”, funded by National Oceanic and Atmospheric Administration
 - Developed machine learning models and image processing methods for analyzing flood risk in crowdsource photos and videos of flooded streets
 - Developed an Android and an IOS app for implementing machine learning models on mobile devices for real-time flood risk analysis in flooded streets using mobile cameras
 - Data mining (mining crowdsource photos of flooded streets in social media)
 - Implemented geographic information system (GIS) based route optimization for flood evacuation route finding
 - Developed a web application strategy for developing an online platform for collecting crowdsource photos of flooded streets, and flood risk mapping using crowdsource data. The designed cyberinfrastructure won the second place in the 2022 Robert Raskin Student Competition
 - Published one journal paper and two conference papers in peer-reviewed and high ranked venues
- Novel Construction Technologies (Tecnosa) R&D Center**, Tehran, Iran August 2016-January 2018
Energy Modeling Researcher
- Developed a building information model for a 12-story residential building
 - Evaluated energy and cost efficiency of the residential building which led to a 28% reduction in the life cycle energy cost by replacing building envelope materials

Course projects

- Implemented reinforcement learning and deep learning models for activity recognition in videos
- Developed a machine learning classifier to perform COVID 19 diagnosis from chest X ray images
- Developed data analysis models to analyze flood risks associated with hospitals, fire hydrants, and population

SKILLS

- Machine learning, data science, statistical modeling
- Deep learning (instance segmentation, text recognition, activity recognition, speech recognition)
- Machine learning packages: TensorFlow, Keras, OpenCV, Scikit-learn, PyTorch
- Programming skills: Python, C/C++, SWIFT, R, JMP, STATA, JAVA, MATLAB, SQL
- Others: CUDA, Meta Framework, GIS, WebGIS

Honors and Awards

- Second place in the Robert Raskin Student Competition by AAG Cyberinfrastructure Specialty Group, 2022
- Selected as an elite student in bachelor studies and awarded a university entrance exam waiver for graduate programs from the Ministry of Science, Research and Technology, 2015