# ROHAN SINGH WILKHO

Machine Learning Engineer

## CONTACT


979-549-8904

rohanswilkho_93@tamu.edu

rohanswilkho93.github.io


## SKILLS

### Machine & Deep Learning

Natural Language Processing, Computer Vision, Feature Engineering, Prompt Engineering, Supervised and Unsupervised Learning

### Geospatial

Remote Sensing, Geospatial Data Analysis, ArcGIS Python Scripting

### Software

Python, R, SQL, ArcGIS Pro, C++

### Interdisciplinary

Causal Discovery, High Performance Computing

### Professional

Analytical Thinking, Collaborative Problem Solving, Project Management, Research

## SELECTED AWARDS

**Academic**
Richard Lietz '45 Endowed Memorial Scholarship

**Leadership/Service**
Texas A&M Montgomery Award

**Research**
2nd Prize in ASFPM Conference Student Paper Competition

## PROFILE

Combining my passion for technology and societal progress, I specialize in machine learning, data analysis and remote sensing, with a focus on developing innovative GIS and AI tools. My experience is enriched by a data science internship and current academic pursuits in both a Doctorate in Civil Engineering and a Master's in Computer Science. I am dedicated to interdisciplinary problem-solving and technological innovation, aiming to contribute meaningful solutions to complex challenges.

## RELEVANT WORK EXPERIENCE

### Graduate Research Assistant

Jan 2019 - Present

Texas A&M University, College Station, Texas

- Led AI-driven web harvesting system at floodfinder360.org, delivering a 63% performance boost in information retrieval for past flash flood events
- Innovated a community-level GIS tool, enhancing flash flood causality identification and susceptibility prediction by 35%
- Developed the Platform for Resilience Inference Measurement and Enhancement, improving socio-economic disaster understanding by 23%: it assesses disaster resilience indices, along with socio-economic influencers
- Leading the development of early warning systems and digital twins for flash flooding, enabling predictive flood mapping with ample lead time for life and property preservation

### Graduate Teaching Assistant

Aug 2022 - Present

Texas A&M University, College Station, Texas

- Created tailored lab manuals and led hands-on sessions for 60+ students, boosting practical skills and engagement
- Collaborated with instructors, integrated tech, and offered personalized support, enhancing the educational environment

### Data Science Intern

May 2022 - Aug 2022

Pioneer Natural Resources, Irving, Texas

- Designed and deployed a predictive model for real-time well-in-test identification during rotational well testing, achieving 93% accuracy
- Successfully tackled a complex business challenge in an unfamiliar industry within a three-month timeframe

## CERTIFICATIONS

**Geographic Information Sciences**
Texas A&M University (Grad Cert.)

**Spatial Data Science**
ESRI

**ArcGIS Python Scripting, R, SQL**
LinkedIn

**Python**
Coursera

## COMMUNITY ENGAGEMENT

**Graduate and Professional Student Government**
Speaker and Executive VP, VP of Information, Senator (2019-23)

**Civil and Environmental Engineering Graduate Student Association**
President, VP, Officer & Founding Member (2019-23)

## EDUCATION

**Doctorate in Civil Engineering** — Jan 2019 - Aug 2024
Texas A&M University, College Station, Texas

**Masters in Computer Science** — Aug 2021 - May 2024
Texas A&M University, College Station, Texas

**Bachelors in Civil Engineering** — Aug 2012 - Jun 2016
Jadavpur University, Kolkata, India

## RELEVANT PUBLICATIONS

**DFFS: A GIS-based tool for dynamic assessment of community susceptibility to flash flooding**
Sustainable Buildings and Society (Under Review)

**FF-BERT: A BERT-based ensemble for automated classification of web-based text on flash flood events**
Advanced Engineering Informatics, November 2023
https://doi.org/10.1016/j.aei.2023.102293

**Predicting Flash Flood Economic Damage at the Community Scale: Empirical Zero-Inflated Model with Semicontinuous Data**
Natural Hazards Review, Sept 2023
https://doi.org/10.1061/NHREFO.NHENG-1729

**FF-IR: an information retrieval system for flash flooding developed by integrating public domain data and machine learning**
Environmental Modelling and Software, June 2023
https://doi.org/10.1016/j.envsoft.2023.105734