

Ali Tousi

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TECHNICAL SKILLS

Machine Learning & AI: Python, Deep Learning (PyTorch, TensorFlow), Computer Vision, Generative Models, Vision-Language Models, Semantic Segmentation, Human-in-the-Loop Systems, Reinforcement Learning

Engineering & Infrastructure: Cloud Computing (Azure/AWS), React, CI/CD, Git

EXPERIENCES

Data Scientist

@ ALS Geanalytics
North Vancouver, BC
Sep 2022 – Now

- Cloud-Based Human-in-the-Loop AI System for Autonomous Inspection
 - Developed and deployed an end-to-end AI-assisted system for automated inspection with secure Azure integration and real-time inference pipeline
 - Created React-based annotation interface for faster human feedback, reducing annotation time through optimized canvas rendering and data aggregation
 - Built log visualizer for auditing AI predictions with auto-completion and efficient data retrieval
- Continuous Learning Pipeline for AI Model Updates
 - Designed and implemented automated pipeline for unpacking and processing log data to continuously update and fine-tune AI models
 - Improved model performance through regular retraining on new data, ensuring adaptability to changing conditions
- Land Cover Segmentation and Data Imputation
 - Built AI framework for segmenting satellite images and data imputation systems for near-detection-limit scenarios

AI Researcher

@ KAIST
Graduate School of AI
Oct 2019 – June 2022

- Novel Post-Hoc Debugging Framework for Generative Vision Model (Published in CVPR 2021, covered by UNITE AI, KAIST Breakthroughs magazine and Korea AI-Times)

EDUCATION

MSc. in Computer Science
and Engineering

UNIST

Aug 2016 – Aug 2018

Thesis: Deep fully residual convolutional neural network for semantic image segmentation

BSc. in Computer Science
Sharif University of Technol-
ogy

Aug 2011 – Jun 2016

PUBLICATIONS

- A. Tousi, H. Jeong, et al.: Automatic Correction of Internal Units in Generative Neural Networks. CVPR, 2021.