Mahdi Hamidbeygi

Data Scientist

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PROFESSIONAL SUMMARY

As an experienced software developer with a strong background in Python and machine learning techniques, I have successfully led projects that enhanced system accuracy by 20% through signal processing stacks and improved equipment efficiency by 50% via Human-Machine Interfaces. My expertise in developing real-time navigation algorithms and quality control models using CNNs aligns well with EverCommerce's focus on delivering top-rated SaaS solutions. With a proven track record of adopting best engineering practices and fostering effective communication across teams, I am eager to contribute to your mission of empowering microbusiness owners through innovative digital platforms.

SKILLS

PROFESSIONAL EXPERIENCE

Data Scientist, Novamera Inc. 7/2023-3/2025

- Designed and implemented real-time navigation and data processing algorithms, improving system accuracy in precision mining
- Developed signal processing stacks that enhanced seismic data quality by 20%, enabling more precise subsurface imaging
- Developed object-oriented Python packages to support quality control and processing workflows, improving overall efficiency and speed by 75%
- Developed Human-Machine Interfaces for operational control, improving equipment efficiency by 50%
- Engineered statistical models for seismic signal denoising, optimizing feature extraction for geophysical applications
- Developed a CNN quality control model, increasing the accuracy up to 90%
- Collaborated with geophysicists to refine data-driven insights, supporting enhanced seismic interpretation and decision-making

Researcher & Developer, University of Calgary 1/2021-12/2022

- Developed a Bayesian probabilistic method for seismic source inversion, increasing accuracy in moment tensor estimations
- Published and integrated Python code into open-source geophysical software (BEAT), contributing to industry adoption
- Applied Sequential Monte Carlo (SMC) methods to reduce uncertainty in seismic model parameters
- Designed a non-Toeplitz covariance matrix approach to enhance noise handling in real-world seismic datasets
- Created and presented technical reports for industry sponsors and academic conferences

Researcher, Dalhousie University 2/2020-8/2020

- Remodeled a fully convolutional neural network (FCN), improving earthquake location estimation
- Reviewed and tested various machine learning algorithms for seismic phase picking and event classification
- Developed a modified graph neural network to improve seismic phase arrival detection

Developer, Dejpadadak 4/2018-1/2020

- Implemented rich user experiences by creating 30+ new features utilizing HTML, JavaScript, and CSS
- Developed and maintained 30+ REST APIs, documenting them using OpenAPI specifications

- Collaborated with 2 engineering teams on domain, design, and code testing for 12+ projects
- Participated in weekly code reviews with 4 senior developers
- Wrote 47 automated tests to raise code quality as part of the development process

PROJECTS

User Experience Enhancement through Feature Development 4/2018-1/2020

- Implemented rich user experiences by creating 30+ new features utilizing HTML, JavaScript, and CSS

Real-time Navigation and Data Processing Algorithms 7/2023-Present

- Designed and implemented real-time navigation and data processing algorithms to improve system accuracy in precision mining

Fully Convolutional Neural Network for Earthquake Location Estimation 2/2020-8/2020

- Remodeled a fully convolutional neural network (FCN), improving earthquake location estimation

REST APIs Development and Maintenance 4/2018-1/2020

- Developed and maintained 30+ REST APIs, documenting them using OpenAPI specifications

Statistical Models for Seismic Signal Denoising 7/2023-Present

- Engineered statistical models for seismic signal denoising, optimizing feature extraction for geophysical applications

EDUCATION

Datacamp - Certified Data Scientist Associate in Data Science
University of Calgary - MSc in Geophysics in Geophysics
University of Tehran - MSc in Earthquake Seismology in Earthquake Seismology
University of Tehran - BSc in Mining Engineering in Mining Engineering