

BALJAT PARMAR

Geospatial Engineer · Machine Learning Engineer · Software Engineer

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PROFESSIONAL SUMMARY

Results-driven Geospatial and Software Engineer with deep expertise spanning machine learning, GIS, remote sensing, and scalable cloud-based systems. Proven track record designing AI evaluation frameworks, geospatial analytics platforms, and disaster-response tools that address real-world challenges. Proficient in Python, spatial data science, AutoCAD, and 3D modeling, with extensive hands-on experience processing satellite imagery, environmental datasets, and high-volume software pipelines.

CORE COMPETENCIES

Technical Skills: Python · GIS & Remote Sensing · Machine Learning & AI Evaluation · Satellite Image Processing · REST API Development · Microservices Architecture · CI/CD Pipelines · Cloud Systems · AutoCAD · 3D & 2D Technical Design

Domain Expertise: Flood Mapping & Environmental Monitoring · Civil Engineering Mapping · LLM Benchmarking & Dataset Curation · Disaster Preparedness Systems · Terrain Analysis & Hydrological Modeling

PROFESSIONAL EXPERIENCE

Machine Learning Python Engineer

Turing (Remote) | Remote | *August 2025 – Present*

- Contribute to the OSWorld Project, designing Python-based evaluation tasks that assess large language models on debugging, code generation, and algorithmic reasoning.
- Analyze model outputs to identify systematic failure patterns and develop high-quality datasets for AI benchmarking.
- Collaborate with globally distributed teams to continuously improve AI evaluation pipelines and assessment methodologies.

Senior Software Engineer

Braysons Engineering & Technology | New York, U.S. | *December 2024 – Present*

- Lead development of scalable, cloud-based software systems, architecting microservices solutions that ensure high availability and resilience.
- Implement and manage CI/CD pipelines, optimize backend services, and improve database performance to support enterprise-grade reliability.
- Mentor junior developers, establishing engineering best practices and caching strategies to enhance system efficiency.

Software Engineer

Securepoint Technologies Ltd | New York, U.S. | *March 2022 – December 2024*

- Developed and maintained scalable web applications and backend services, designing RESTful APIs capable of handling high-volume traffic.
- Built responsive, user-facing interfaces using modern JavaScript frameworks, delivering production-ready features in collaboration with product and QA teams.

- Drove measurable improvements in application performance through profiling, optimization, and architecture reviews.

Volunteer GIS Developer

Kenya Red Cross Society | New York, U.S. | *November 2023 – Present*

- Develop geospatial tools supporting disaster preparedness and emergency response for vulnerable communities across Kenya.
- Process satellite imagery and environmental datasets to produce flood extent maps, drought indicators, and climate analytics that feed early warning systems.
- Leverage Python and GIS technologies to automate spatial data workflows, reducing response time for humanitarian field teams.

NOTABLE PROJECTS

Hydrological Study Tool

Engineered a Python-based system for analyzing Digital Elevation Models (DEMs) to support terrain analysis and flood risk assessment, enabling more accurate hydrological predictions for environmental planning.

Drone-Based Tree Classification

Designed and implemented a machine learning workflow for automated vegetation classification using drone imagery and multispectral data, advancing precision monitoring for forestry and land management applications.

EDUCATION

Bachelor of Science in Geospatial Engineering

University of Michigan