

Software Developer for ECGenius

April 1, 2025

1 Overview

ECGenius is a web app that analyzes scanned ECG reports using image processing and similarity-based diagnostics to support clinical triage, particularly in low-resource settings. Built with a React frontend, Flask backend, and SQL database, it leverages tools like OpenCV and YOLOv7.

We're hiring a developer to maintain and extend ECGenius, with a focus on backend services, performance optimization, and feature development driven by clinical feedback.

2 Responsibilities

- Maintain backend pipelines for ECG digitization, signal extraction, and diagnostics.
- Troubleshoot issues and implement new features based on user needs.
- Integrate and optimize tools like YOLOv7, OpenCV, WFDB, NumPy, and PyTorch.
- Ensure secure handling of sensitive data and system scalability.
- Collaborate with frontend developers and contribute to clear documentation.

Required Skills

- Proficient in Python, Flask, and REST API design.
- Experience with backend workflows and file processing (image/signal).
- Familiar with OpenCV, NumPy, SQL, and Git.
- Comfortable with frontend-backend integration (React or similar).

3 Preferred Qualifications

- Background in ECG signal processing or healthcare software.
- Experience with PyTorch/TensorFlow and ML inference workflows.
- Familiarity with internationalization and accessibility best practices.