CS 491 - Fall 2025 Project Information Form

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Name of the Project: Pathogenius

One paragraph description of the project:

Pathogenius is a portable, GPU-accelerated platform built to deliver rapid pathogen detection in resource-constrained settings such as disaster zones. Unlike conventional bioinformatics systems that depend on powerful clusters and a stable internet connection, it is designed to run offline on modest local hardware, making it practical for hospitals, field clinics, and emergency teams. By optimizing and constructing workflows for pathogen identification, the system shows how genetic data can be transformed quickly into clear, actionable results that non-coding experts such as doctors can trust. The vision is a compact, reliable, and commercially viable tool that brings advanced pathogen diagnostics out of specialized labs and directly into real-world crisis response.

Supervisor Name and Lastname: Can Alkan

Innovation Expert Name and Lastname: Can Alkan

The URL of the Project Web Page: https://patho-genius.github.io/

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