

AI-Assisted Home & Building Inspection

AI for Good Hackathon - Hack2Skill

Participant:

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Problem Statement

- Home buyers and tenants often face hidden building defects such as cracks, leakages, damp walls, and unsafe wiring.
- Manual inspections are time-consuming, inconsistent, and prone to human error. There is no intelligent system to analyze inspection data systematically.

Solution Overview

- An AI-powered inspection system that analyzes inspection text and images to automatically detect building defects.
- The system generates risk scores and inspection summaries to help buyers, inspectors, and regulators make better decisions.

How It Works

- Inspection data (text and images) is uploaded
- Data is stored in Snowflake
- Snowflake Cortex / AI SQL classifies defects
- Risk scores are generated
- Results are displayed using a simple dashboard

Impact

- Improves housing safety
- Reduces inspection time and cost
- Helps families avoid unsafe homes
- Supports regulators and authorities
- Promotes safer urban infrastructure

Technology Stack

- Snowflake
- Snowflake Cortex / AI SQL
- SQL
- Python
- Streamlit
- Cloud Storage
- CSV datasets

Thank You