ZIGGS: Sound detection in households

Ivan Milosavljevic
Jan Imhof
Samuel Oberm
Nicolas Busquet

PROJECT CONCEPT

SURVEILLANCE

Household surveillance for children, elderly and pets using LG devices

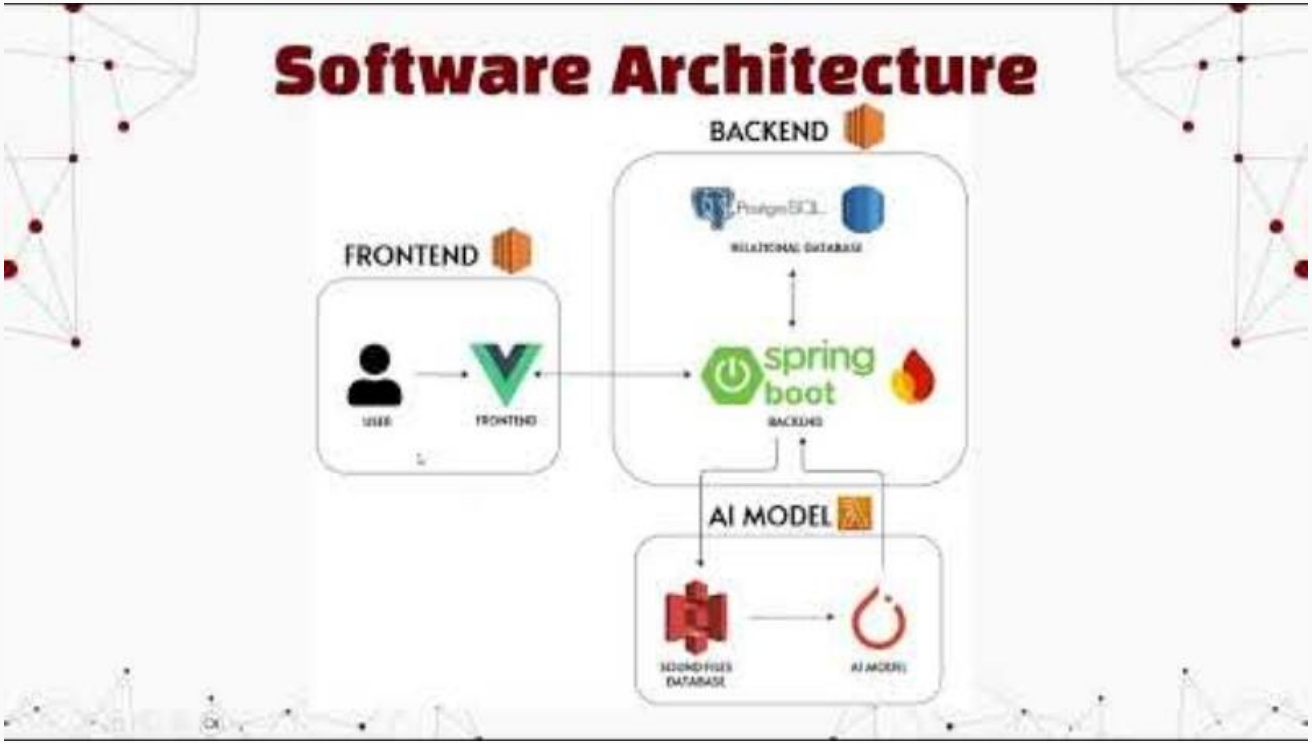
SMART DEVICE

Trained a CNN Model on detecting anomalies tailored for each house

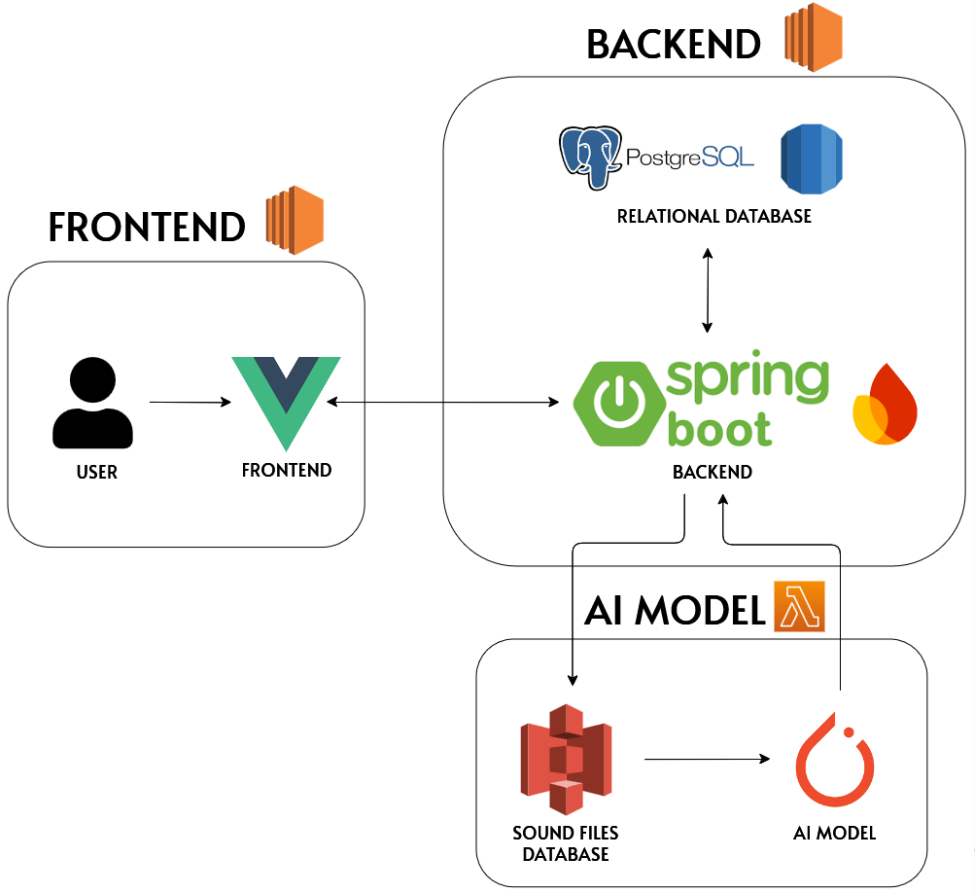
CONVENIENCE

Connects accounts to Household for alert management

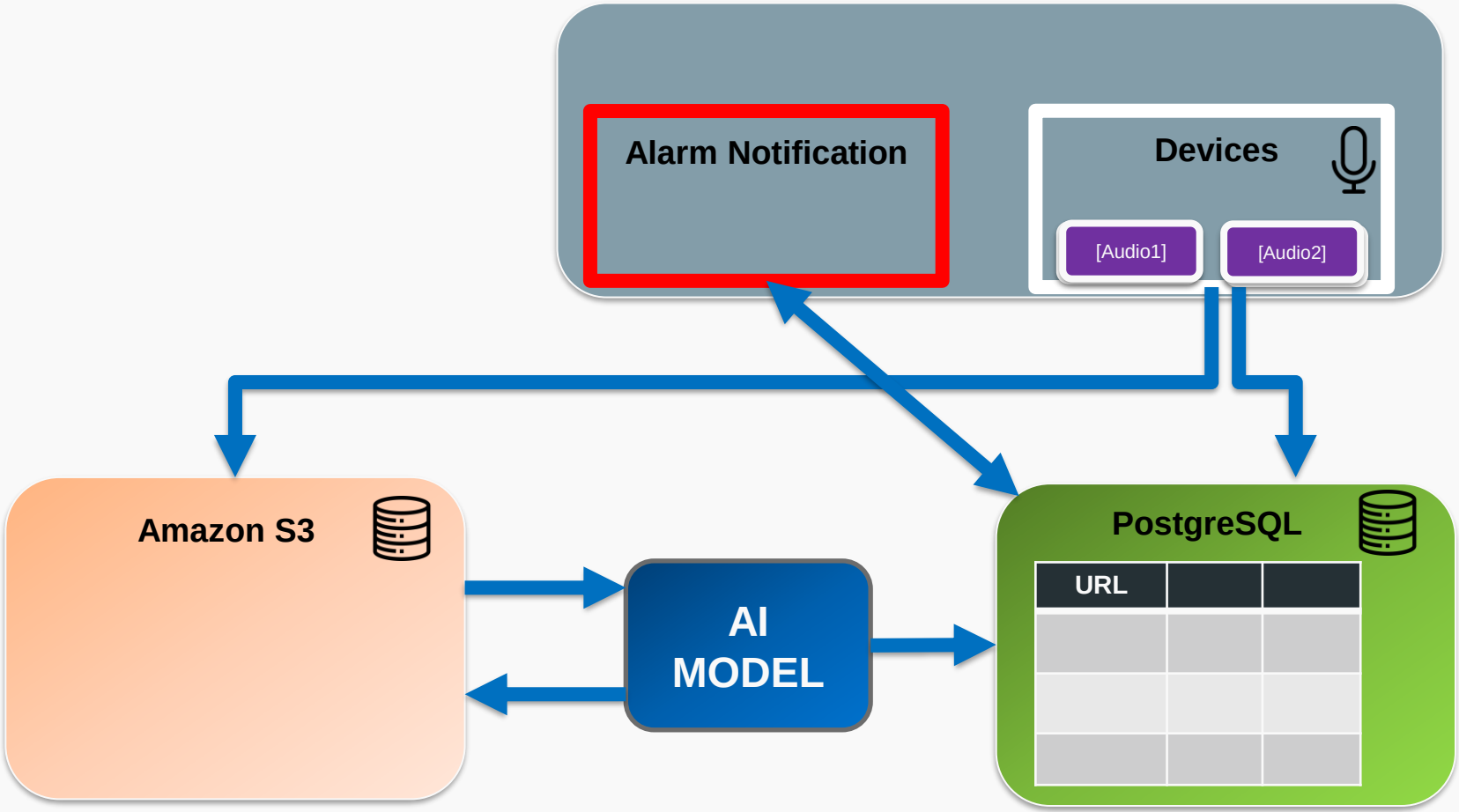
DEMONSTRATION VIDEO



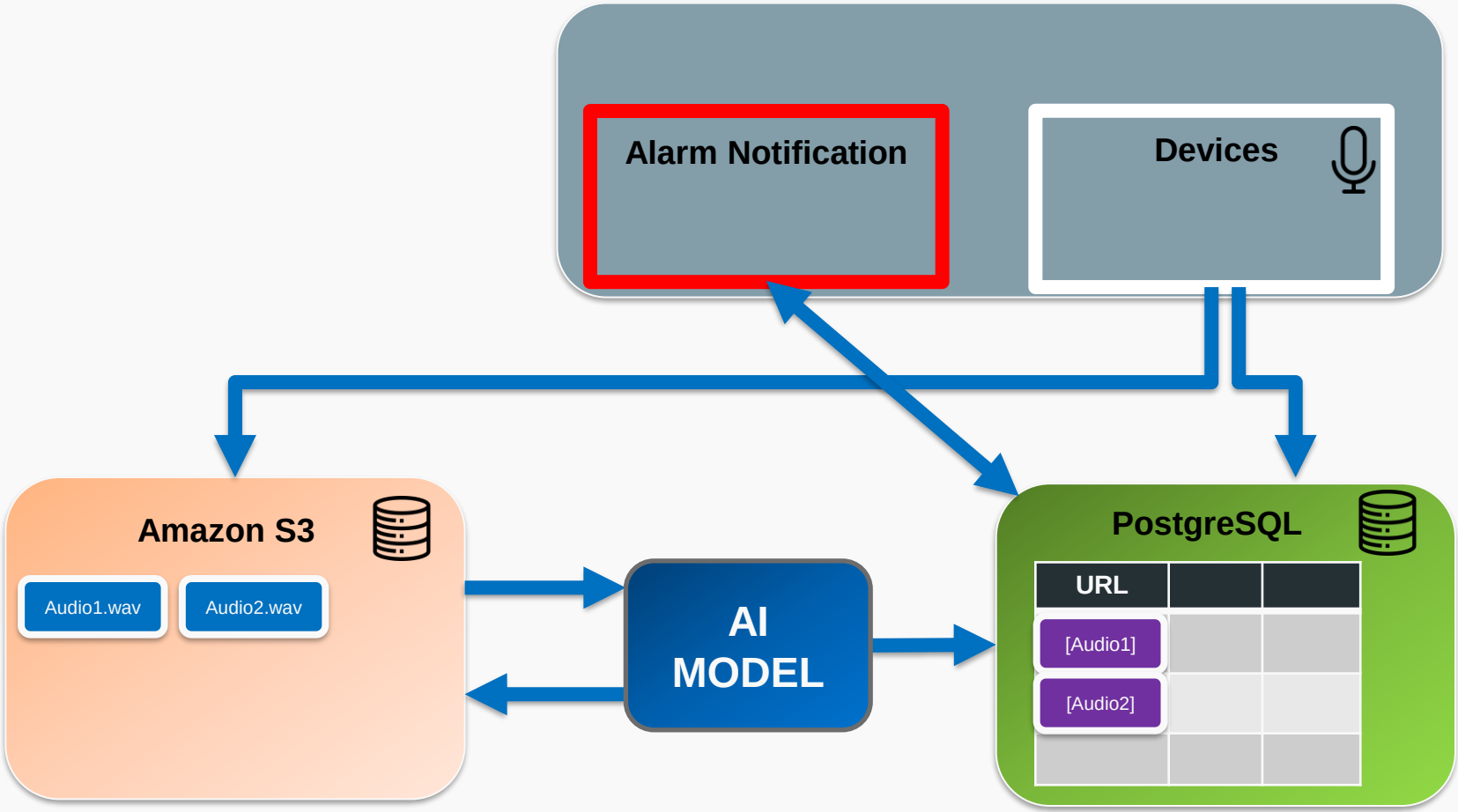
Software Architecture



Data Flow


Alarm Notification
Devices
[Audio1]
[Audio2]
Amazon S3
AI
MODEL
PostgreSQL
URL

Data Flow


Alarm Notification
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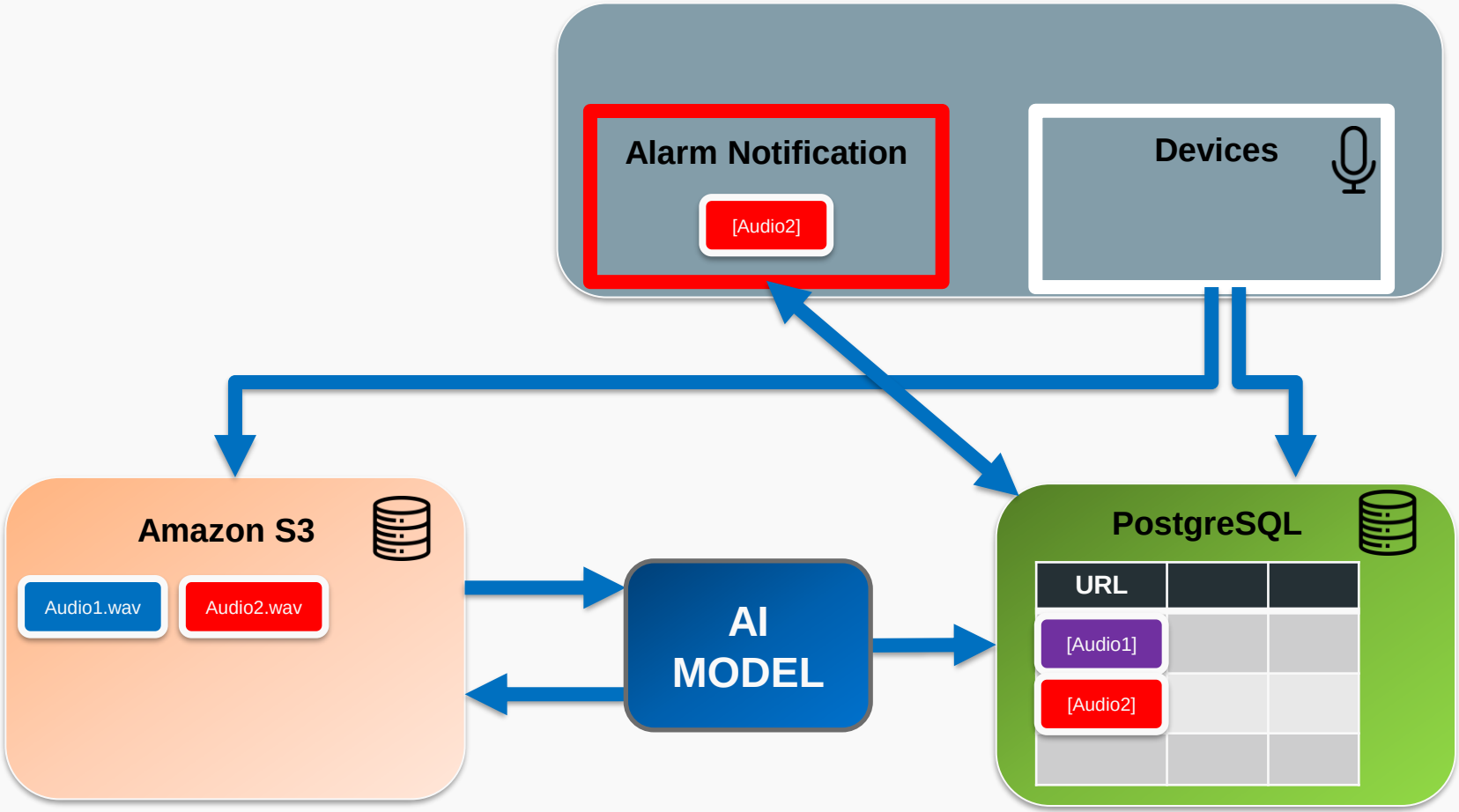
Amazon S3
Audio1.wav
Audio2.wav
AI
MODEL
PostgreSQL
URL
[Audio1]
[Audio2]

Data Flow


Alarm Notification
[Audio2]
Devices
Amazon S3
Audio1.wav
Audio2.wav
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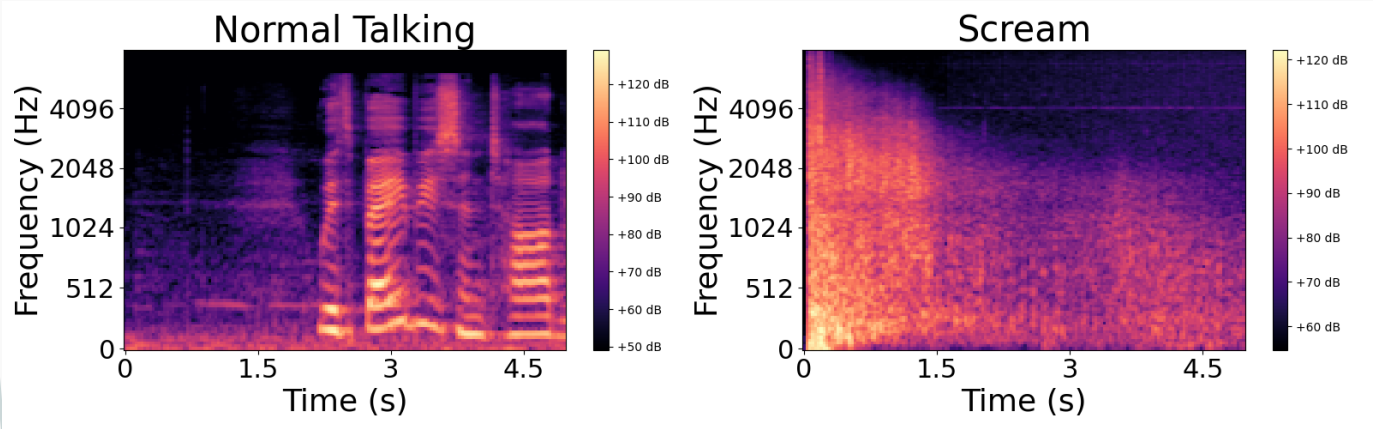
MODEL
PostgreSQL
URL
[Audio1]
[Audio2]

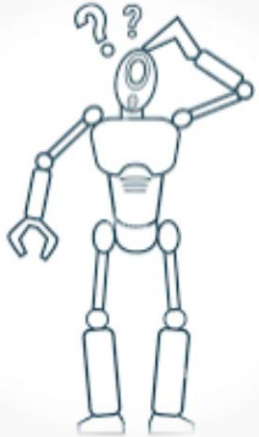
DATASET - FIVE SECONDS

Category	Type	Source	Duration	Number of Files
Household Noises, Conversations	Normal	ChildPlay Gaze, Extracted from Reddit	5 seconds	201
Accidents, Gun Shots, Screams, Glass Breaking	Anomaly	Extracted from Reddit	5 seconds	140



RETRAINABLE AI MODEL

The Model can effectively learn and train itself, so that the device is tailored to each household making each alert more precise over time



THANK YOU FOR LISTENING

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