INTERNSHIP REPORT

**Project Title:** Wake Word Detection – Evaluation Script for Alexa Pre-Trained Model

INTRODUCTION

During my internship, I worked on a project based on Wake Word Detection, specifically for the word **Alexa**. The main goal of this project was to understand how a pre-trained model can detect a wake word in audio and to evaluate the performance of this model using a custom script.

Wake word detection is a key part of any voice assistant system. It allows the device to **wake up** when a specific word is spoken. For example, Alexa-enabled devices respond only when they hear Alexa. This project helped me understand how such detection works in the background using machine learning models and audio processing.

I worked mostly with Python and used a public GitHub repository called openWakeWord (<https://github.com/dscripka/openWakeWord>), which provides tools and models for building wake word detection systems. Through this project, I learned how to work with ONNX and TFLITE models, extract audio features, write evaluation code, and analyze the results.

TOOLS and RESOURCES USED