Project Proposal

Google Cloud Speech API Based Encrypted Notes

Introduction:
Information Privacy in today's world is of top concern. If your data is not secure, it's not private. Encryption is one way of protecting information from unauthorized access either in transit or in storage. While encryption has been around for years and used mainly by governments to communicate privately. It's only now in recent years' public companies are starting to implement them.

Objective:
We've all been there, saving usernames, passwords, credit card information and all sorts of other login credentials and private information on sticky notes or on text files. On a mobile phone, a single point of failure, key code/passcode/fingerprint remains the only way to protect your information from unauthorized access. Encrypting data such as this provides an extra layer of protection against exploitation of stolen data.

The objective of this mobile application is as such, provide a safe and secure notes/memo's application to store your sensitive information securely without compromising on security.
- Save your notes by typing them in manually
- Save your notes through voice dictation powered by Google Cloud Speech API
- All notes are Encrypted with 256-bit AES encryption
- A Simple User Interface
- All notes are saved encrypted in internal memory on the phone

Project details:
- **Environment:**
    I. The application is going to be built using java programing language as an Android App
- **Challenges for implementation:**
    I. Implementing the Google Cloud Speech API as a primary way to provide input into the App to save notes/memo's
    II. Implementing AES encryption on the translated speech-to-text response from the Google Cloud Speech API
    III. Notes are never saved in their decrypted state anywhere on the app or internally on the phone. All decryption is done on the fly when user requests for it through the app

References:
- https://privacy.google.com/your-security.html : "Google Security Privacy Policy"
- https://cloud.google.com/speech/docs/ : "Google Cloud Speech API Documentation"
- https://en.wikipedia.org/wiki/Encryption : "Wikipedia: Encryption"

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