Dev-Progress Report: Sign Language Translator

### Team: Yoda

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**I. Feature Development Updates:**

1. Data Collection: Collected an image and video-based database containing a huge variety of sign language with American standard sign language (ASL).
2. Model Training:
3. API Integration: Working Authentication with Firebase.
4. Frontend Development: Created a basic front-end prototype using Flutter and made some working pages like the login page and homepage

**II. AI Model Training and Results:**

1. Hyperparameter Tuning: Experimenting with different learning rates, optimizers, and network configurations to improve model accuracy. Tuning LSTM parameters such as forget gate bias and memory initialization.
2. Evaluation Metrics: Tracking accuracy, precision, recall, and F1-score on both the training and validation datasets. Exploring additional metrics such as confusion matrix and ROC curve analysis.

**III. Basic Frontend:**

1. Current Features: Display login page, Homepage and Profile Page
2. Planned Features: 1. Create a Visual learning Dictionary

2. Make the Capture Page functional