SIGNALVISION

CS131- Final Project

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ARTIFICIAL INTELLIGENCE (AI)

01.

PROBLEM

Houston, we have a problem!

PROBLEM

- Deaf people have to rely on others to learn signal communication
- Instructors are expensive and not everyone can afford
- Cannot always access an instructor

/[AI]

02.

SOLUTION

SIGNALVISION , the solution to all problems

SOLUTION

SIGNALVISION

- No longer have to pay an instructor
- Cloud storage to provide model feedback
- Model feedback also improves accuracy
- Always accessible
- Test & trial

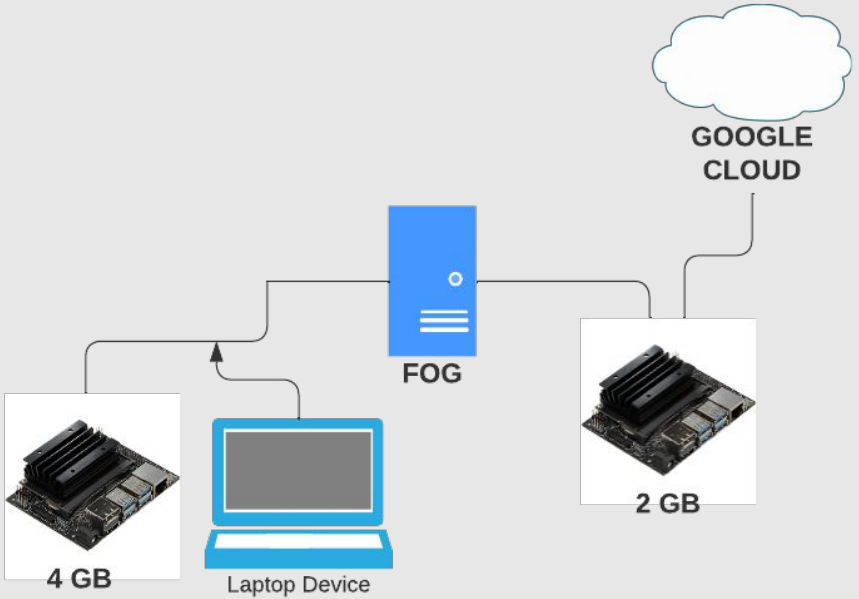
03.

IMPLEMENTATION

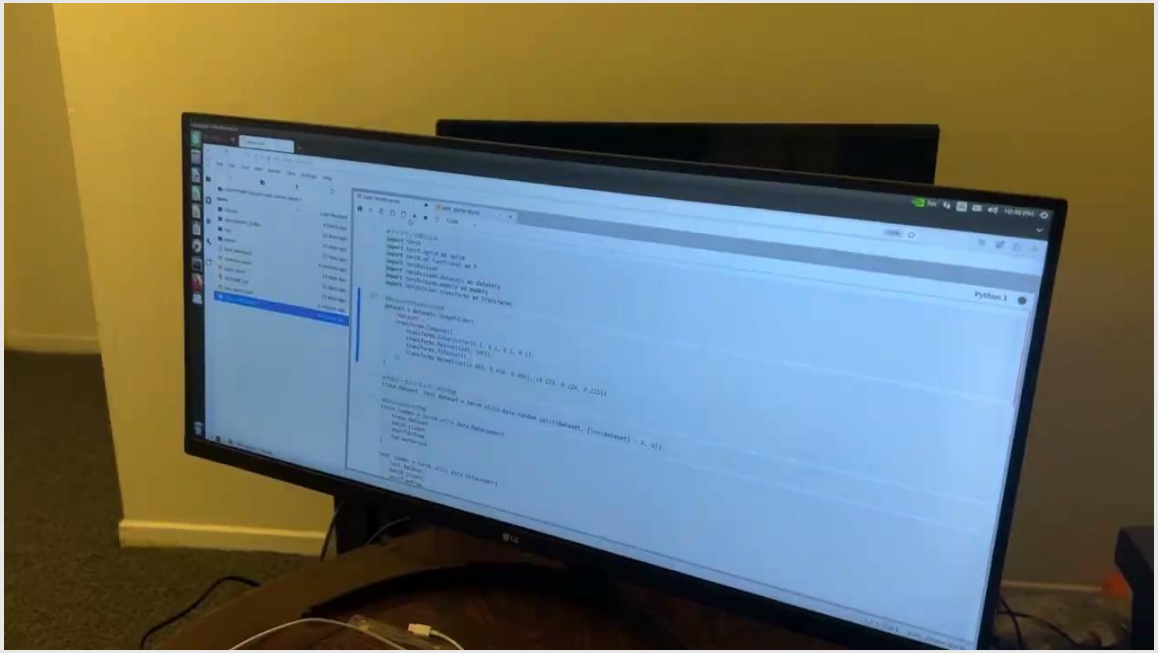
Gettin' down to business

IMPLEMENTATION

- AlexNet
- TensorFlow, Pytorch
- Machine Learning
- GCP
- 4G and 2G Nano



DEMO



[AI]

04.

CHALLENGES

yeah, we had issues :'(

CHALLENGES

TRAINING

Training the model was a long and challenging process.

JETSON PERFORMANCE

Poor ARM Cortex-A57 Processor performance. Low RAM yielded slow performance.

LOW RESOLUTION

Jetson Nano too slow for higher resolution cameras. Opted for 480p resolution.

FUTURE IMPROVEMENTS

MEMORY

Improved memory
and runtime.

TRAINING SET

Expand on training set.
Add more phrases in ASL.

ADVANCED API CLOUD

Add more advanced cloud APIs
to provide model feedback.

ACCURACY

Add more images for higher
accuracy levels.

ARTIFICIAL INTELLIGENCE (AI)

FIN.

Questions?

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