

Final Project

Your task:

- (i) **read** and understand a research paper,
- (ii) **implement & reproduce** (a part of) the paper,
- (iii) try a small **extension to the existing method**,
- (iv) perform qualitative/quantitative **experimental evaluation**

Deliverables:

- (a) 1-page proposal (Nov 17): read papers, choose topic, make detailed plan (will receive feedback)
- (b) Presentation (Jan 11-12): brief introduction, clarify your contributions, results, visuals
- (c) Report (Jan 18): 3-page description plus visuals and bibliography

Typically requires multiple weeks of intense work, therefore, starting early is recommended. Start now if you can. Wait for TAs announcement to claim your Google Cloud Credits.

Communicate with your project supervisor!

Final Project Topics

- [A] Can Zeroth-Order Optimization Further Enhance **Category Discovery**?
- [B] Physical plausibility in **3D human motion estimation**
- [C] Entering the Matrix: Disentangling time and space in feed-forward **3D reconstruction**
- [D] What is time? Investigating how motion understanding can emerge from **visual encoders**
- [E] How much geometry does **room acoustics generation** need?
- [F] 3D Hand **motion generation from text**
- [G] **Sign language** recognition
- [X] Your own chosen topic

Final Project Topics

[A] Can Zeroth-Order Optimization Further Enhance Category Discovery?



from visual encoders

[E] How much geometry does room acoustics generation need

[F] 3D Hand motion generation from text

[G] Sign language recognition

[X] Your own chosen topic



Fernando Cendra

Final Project Topics

[A] Can Zeroth-Order Optimization Further Enhance Category Discovery?

[B] Physical plausibility in 3D human motion estimation

[C] Entering the Matrix: Disentangling time and space in feed-forward 3D

reconstruct

[D] What is

from visual

nding can emerge

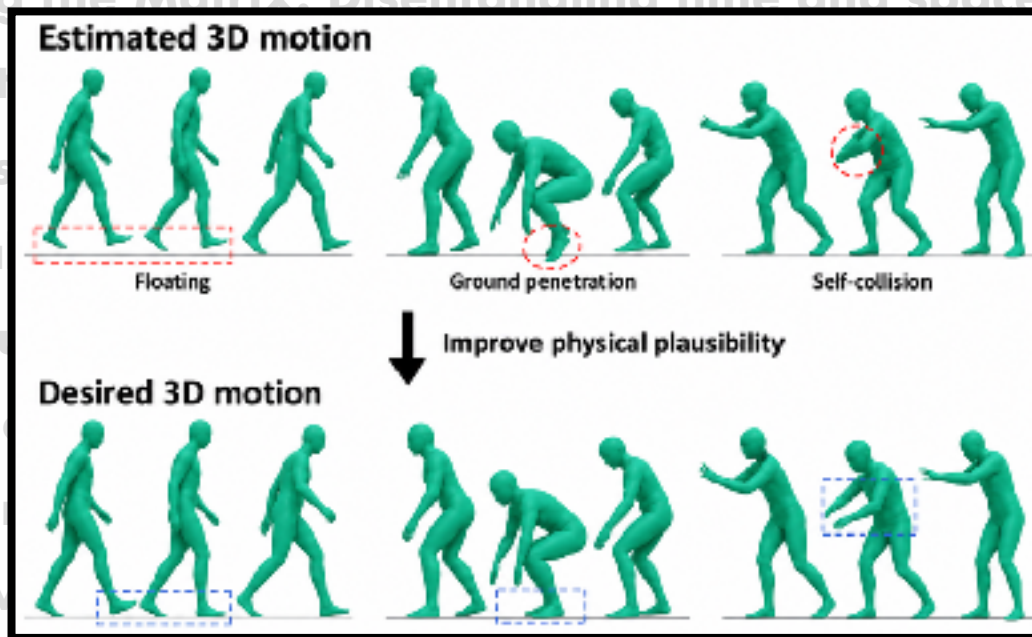
[E] How m

ion need?

[F] 3D Han

[G] Sign la

[X] Your ov



Yangsong Zhang

Final Project Topics

[A] Can Zeroth-Order Optimization Further Enhance Category Discovery?

[B] Physical plausibility in 3D human motion estimation

[C] Entering the Matrix: Disentangling time and space in feed-forward 3D reconstruction

[D] What is time? Investigating how motion understanding can emerge

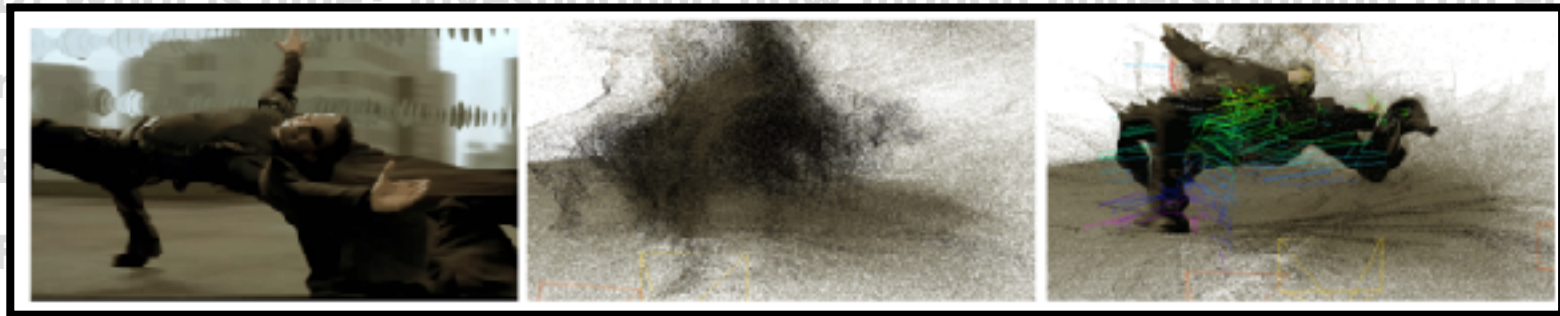
fr

[E]

[F]

[G] Sign language recognition

[X] Your own chosen topic



Victor Barberteuguy

Final Project Topics

[A] Can Zeroth-Order Optimization Further Enhance Category Discovery?

[B] Physical plausibility in 3D human motion estimation

[C] Entering the Matrix: Disentangling time and space in feed-forward 3D reconstruction

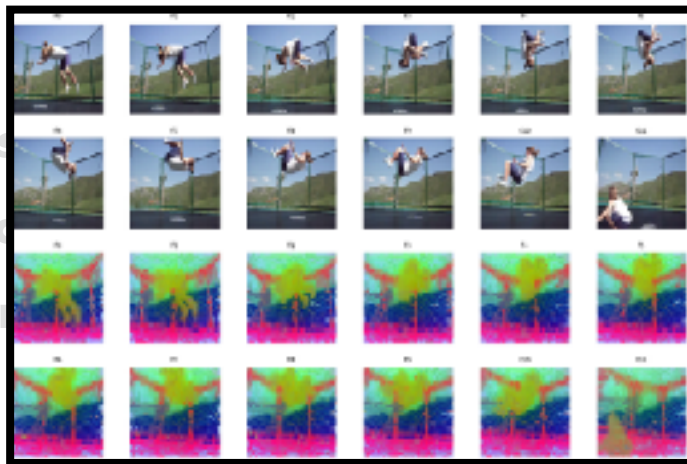
[D] What is time? Investigating how motion understanding can emerge from visual encoders

[E] How much geometry does a model need?

[F] 3D Hand motion generation

[G] Sign language recognition

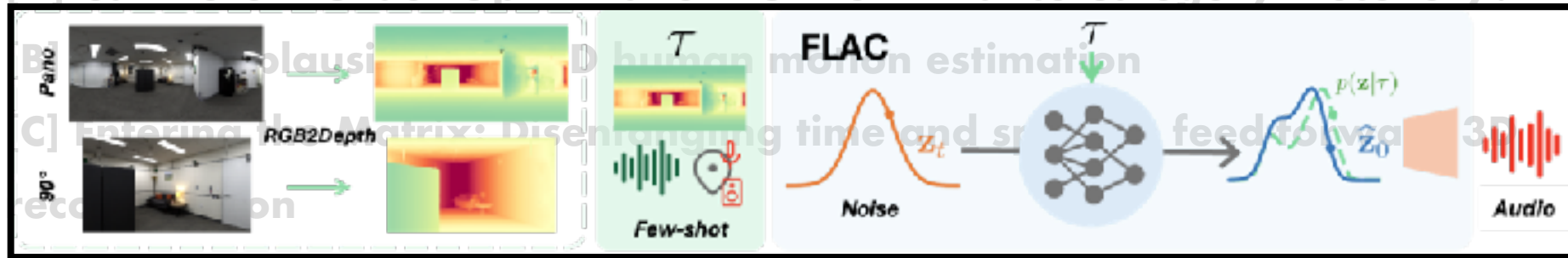
[X] Your own chosen topic



Alexis Marouani

Final Project Topics

[A] Can Zeroth-Order Optimization Further Enhance Category Discovery?



[D] What is time? Investigating how motion understanding can emerge

from visual encoders

[E] How much geometry does room acoustics generation need?

[F] 3D Hand motion generation from text

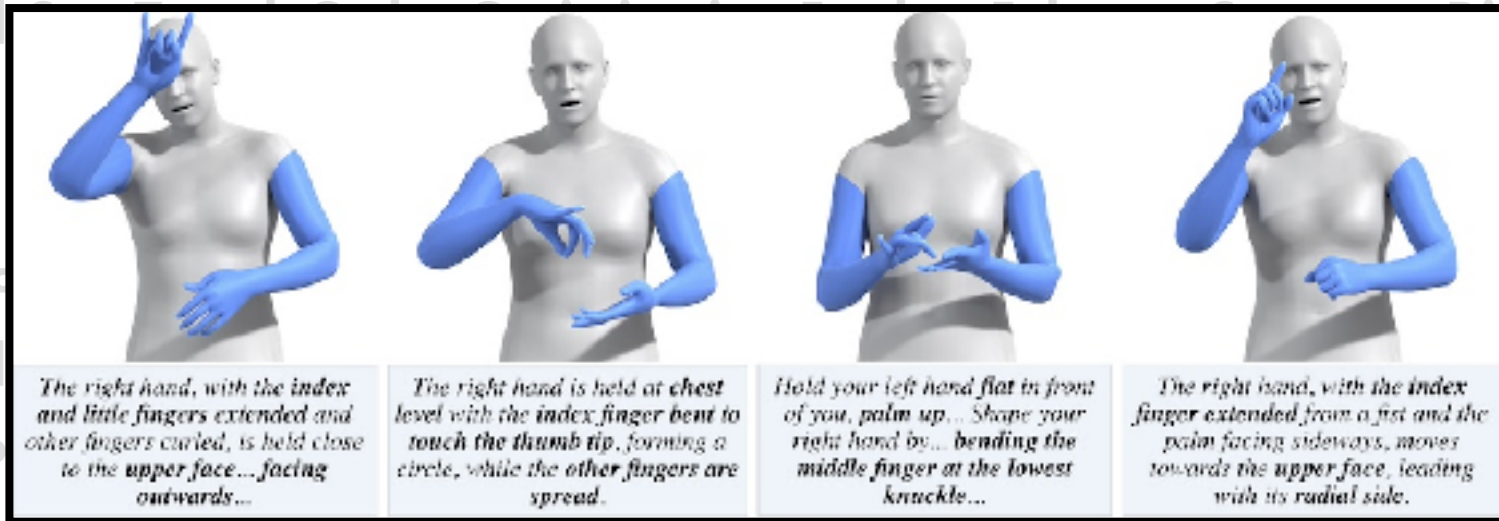
[G] Sign language recognition

[X] Your own chosen topic



Amandine Brunetto

Final Project Topics



[F] **3D Hand motion generation from text**

[G] Sign language recognition

[X] Your own chosen topic



Léore Bensabath

Final Project Topics

[A] Can Zeroth-Order Optimization Further Enhance Category Discovery?

[B] Physical plausibility in 3D human motion estimation

[C] Entering the future of sign language recognition: a feed-forward 3D reconstruction

[D] What is the role of sign language in emerging AI?

from visual e

[E] How much

[F] 3D Hand

[G] Sign language recognition

[X] Your own chosen topic



Youngjoon Jang

Final Project Topics

[A] Can Zeroth-Order Optimization Further Enhance Category Discovery?

[B] Physical plausibility in 3D human motion estimation

[C] Entering the Matrix: Disentangling time and space in feed-forward 3D reconstruction

[D] What is time? Investigating how motion understanding can emerge from visual encoders

[E] How much geometry do we need?

[F] 3D Hand motion generation

[G] Sign language recognition

[X] Your own chosen topic

- A paper discussed in the class, topics from previous years, your personal interests...
- At your own risk, i.e., supervision might be suboptimal.
- Validate with me beforehand by sending an email!
- Also see recent papers at <https://gulvarol.github.io/#research> such as Chapter-Llama, MotionFix, CoVR.

Final Project Topics

- [A] Can Zeroth-Order Optimization Further Enhance **Category Discovery**?
- [B] Physical plausibility in **3D human motion estimation**
- [C] Entering the Matrix: Disentangling time and space in feed-forward **3D reconstruction**
- [D] What is time? Investigating how motion understanding can emerge from **visual encoders**
- [E] How much geometry does **room acoustics generation** need?
- [F] 3D Hand **motion generation from text**
- [G] **Sign language** recognition
- [X] Your own chosen topic

