README

- Slides 11-14 to be used for your project pitch. Please send the slides to vismac2025@gmail.com with subject “[ELLIS-VISMAC][Group##] project pitch”. Deadline on Thursday Jan 30th 11:59pm.
- Slides 2-10 to be used for the final presentation. You will have 5 mins to present. Please send the slides to vismac2025@gmail.com with subject “[ELLIS-VISMAC][Group##] project presentation”. Deadline Friday Jan 31st 8:59am.

ELIAS-ELLIS-VISMAC

Winter School

27-31 January, 2025
Brunico, Italy

Funded by the European Union

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Team Members

- Adrián Szlatincsán
- Claudio Schiavella
- Dania Batool
- Francesco Dibitonto
- Francesco Pro

Team Mentors

- Bin Ren
- Moreno D'Incà

Application Name

- Problem the team is trying to solve.
- Scientific driver for the chosen algorithm.
- What’s the algorithmic motif?
- What parts are you focused on?

Evolution and Strategy

- What was your goal?
- What was your initial strategy?
- How did this strategy change?

Results

- What were you able to accomplish?
  - Did you achieve a speed up?
  - Do you have any GPU numbers
- What did you learn?
  - Did you create a new algorithm?
  - Did you achieve new scientific goals?

What problems have you encountered?

- Problems with legacy app structure.
- Issues with algorithms.
- Tool bugs.
- Tool lacking features.
- System setup.

Wishlist

What do you wish existed to make your life easier?

- Tools
- Language standards
- Event
- Systems

Final Thoughts

- Was this Project worth it?
- Will you continue development?
  - Next steps, future plans.
- What sustained resources or support will be critical for your work after the event?

Thank you!

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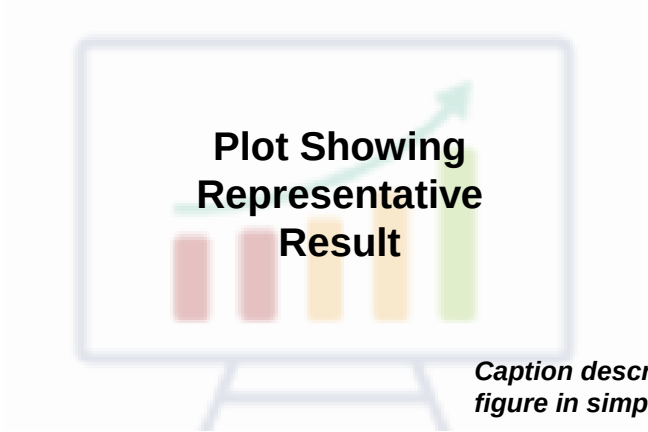
Application Background

- Vision Language models have demonstrated remarkable performances
- **But** they have inherited biases from the training corpus
- Target computational motifs: Multimodal Learning, Large-Scale Pretraining, Bias Mitigation



Caption describing figure in simple terms

Hackathon Objectives and Approach

- Mitigate the bias of Visual Language Model
- Generate unbiased text-image dataset
- Fine-tune the model with unbiased dataset
- Evaluate the fine-tuned model with appropriate metrics

Technical Accomplishments and Impact

- We achieve bias mitigation throught a general and innovatice technique
- We developed unbiased dataset generation with GPT4 and FLUX, and fine-tuning OpenCLIP with DoRa
- This allow a socially-aware using of powerful Visual Language models

Project Summary

Please summarize your team’s achievements during the Project (100 words).

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