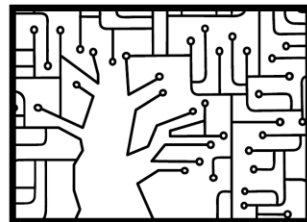


Final Project: What, how, and when

Shai Bagon



WAIC

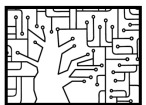
Final Project

Goal: “hands-on” exploration of concepts taught in class

- Fairly open-ended.
- Vision focused: projects must include **visual data**.
- Be creative ;)

Work in groups of 2-3 students

Do what is important or interesting to you



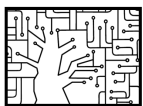
A Project You Aim for

- Application:

Apply DL+CV concepts to new visual data at your lab

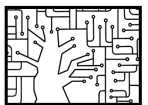
- Method:

Propose new architecture/loss/training scheme/algorithm and apply it to some CV problem



A Project You Aim for

- Aim for projects that:
 - Propose novel **variant** of an existing method/paper
This can be a “follow-up” to a recent paper
 - Adapt an existing method to a new problem/domain
- Try to avoid:
 - Focusing on “data collection”/tedious labeling...
 - Cloning existing code and incorporating minor incremental changes



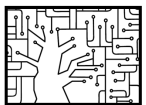
Does my project meet expectations?

Your project **does**

- Need to show significant **effort**
- Need to demonstrate insights

Your project does **not**

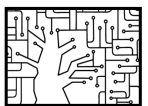
- Need not be strictly novel
- Need not beat state-of-the-art



Does my project meet expectations?

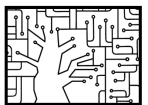
You project must include

- **Prior work** – what has been done in your context?
Are there novel aspects in the project?
- **Analysis** – explain the results, do not merely state them.
Negative results are okay as long as you can explain/justify them.
- **Evaluation** – try to evaluate your results from different perspectives.



Practical Considerations

- **Data:** is there existing and available data?
- **Code/framework:** do you need to implement everything from scratch?
- **Compute resources:** How much compute power/time it requires?



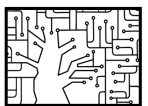
Inspiration

Papers from leading conferences:

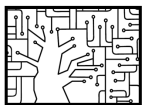
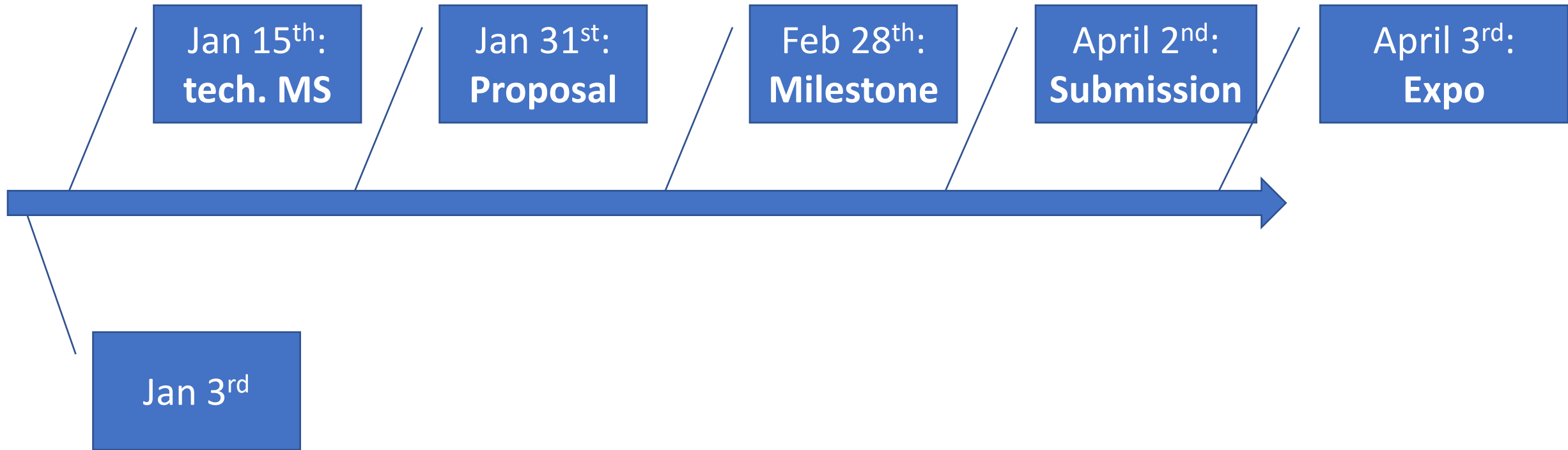
[CVPR](#), [ICCV](#), [ECCV](#), [ICLR](#), [NeurIPS](#), [ICML](#)

Additional sources:

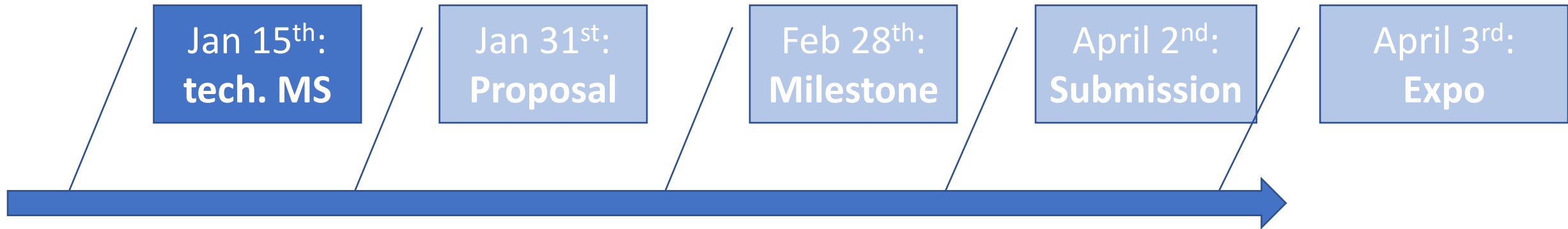
[Papers with code](#), [Kaggle](#), [MAFAT](#)



Timeline



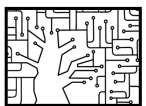
Timeline



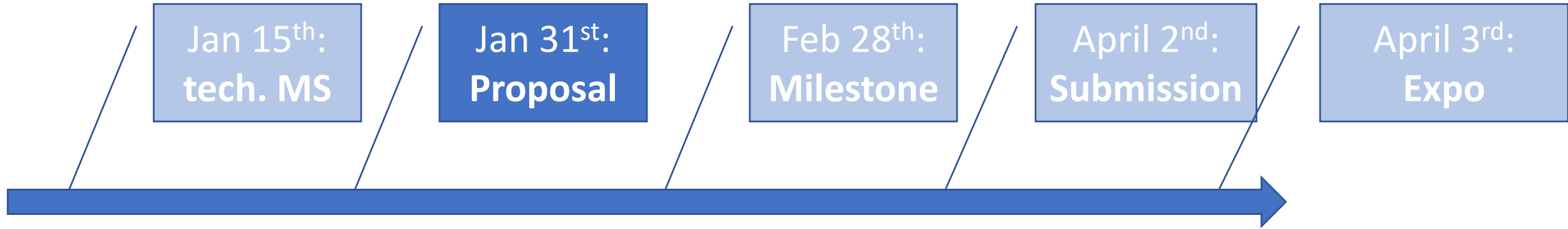
Technical milestone:

- Team-up (2-3 students)
- WEXAC account
- Working environment

Via google form



Timeline

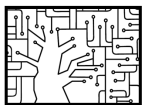


A PDF document (part of the final grade)

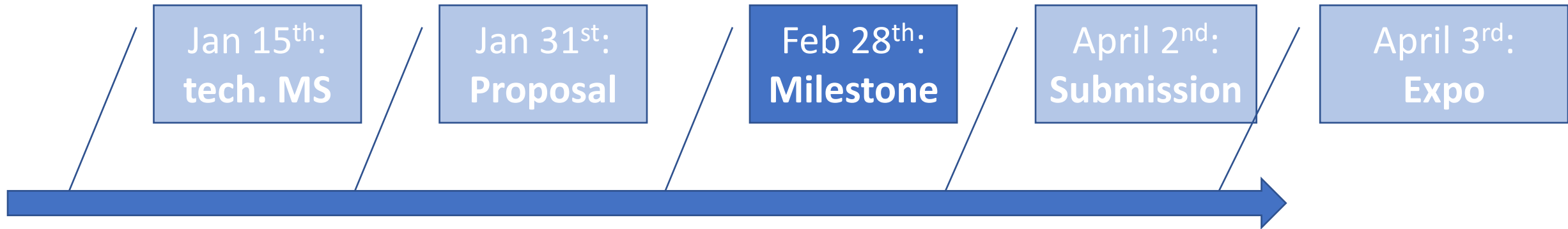
Project Proposal Doc

- Problem statement/Motivation:
Relevance, domain, inputs->outputs,
- Related work
- Proposed method
- Possible pitfalls
- Data
- Planned evaluation

2 pages + references

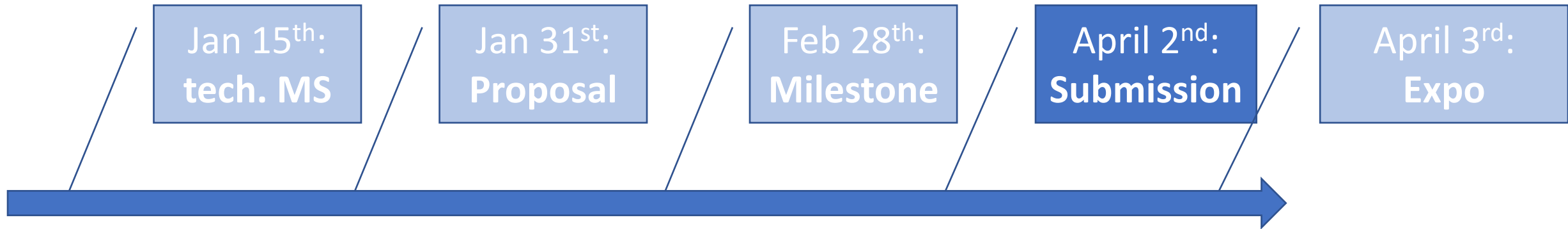


Timeline



- **Preliminary** Results
- Rising Flags

Timeline



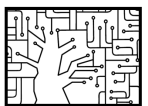
3-5min video + final report

NO EXTENSIONS!

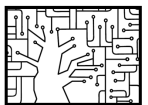
Final Report Doc

- Abstract
- Problem statement/Motivation
- Related work
- Method
- Data
- Experiments and **Analysis**
- Conclusion: “take home message”

3-4 pages + references



Final project example

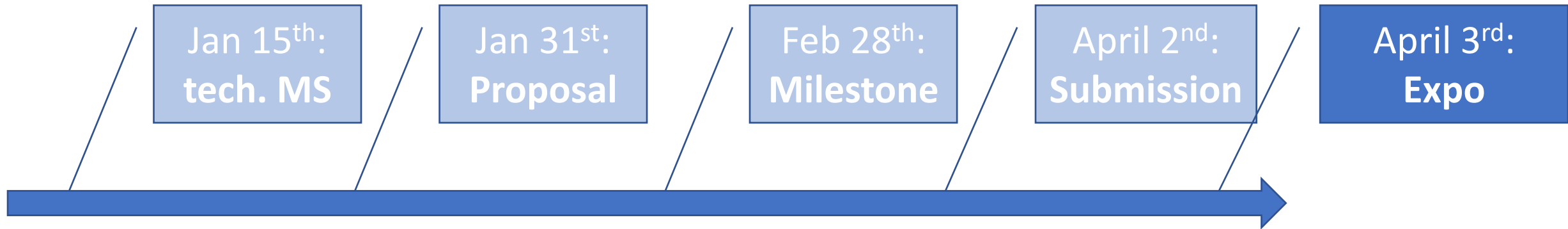




DL4CV FINAL PROJECT

Airbnb listing price prediction using ViT

Timeline

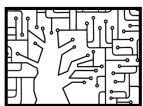


Present All projects + short Q&A

All morning, attendance is mandatory.

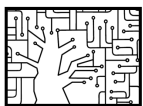
Supervision

- Each team will have a supervising staff member
- Feedback will be given for the submitted reports

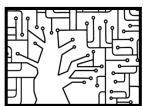


Talk to us!

Don't wait to the last minute



Attend Class!

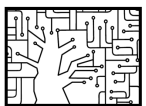


WAIC

DL4CV @ Weizmann

Questions?

More details: dl4cv.github.io/final_project.html



How to Read a Paper?

Reading in a “non-linear” fashion:

- Get the gist:
Read title + abstract
Figures + captions
- Is it relevant?
Method section
Results section
- Need more details?
Read end-to-end
Look for additional sources: slides, blogs, videos, github...