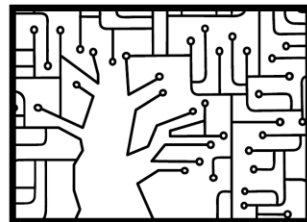


Final Project: What, how, and when

Shai Bagon



WAIC

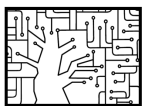
Final Project

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



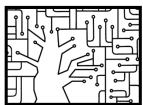
A Project You Aim for

- 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

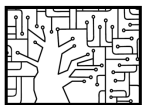
Does my project meet expectations?

Your project **does**

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

Your project does **not**

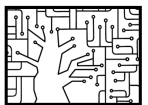
- Need not be strictly novel
- Need not beat state-of-the-art



Does my project meet expectations?

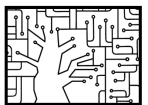
You project must include

- **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?



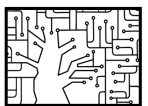
Inspiration

Papers from leading conferences:

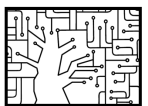
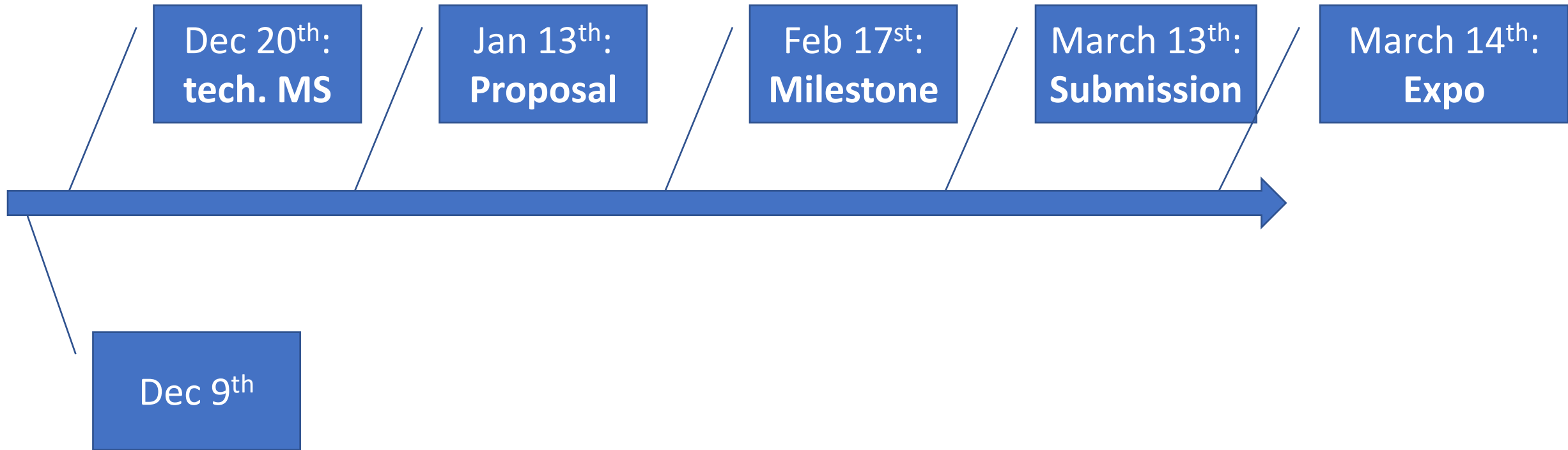
[CVPR](#), [ICCV](#), [ECCV](#), [ICLR](#), [NeurIPS](#), [ICML](#)

Additional sources:

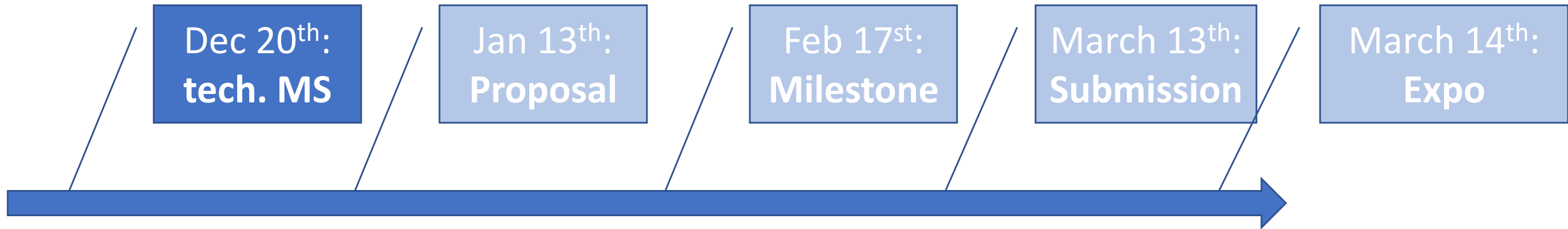
[Papers with code](#), [Kaggle](#)



Timeline



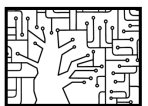
Timeline



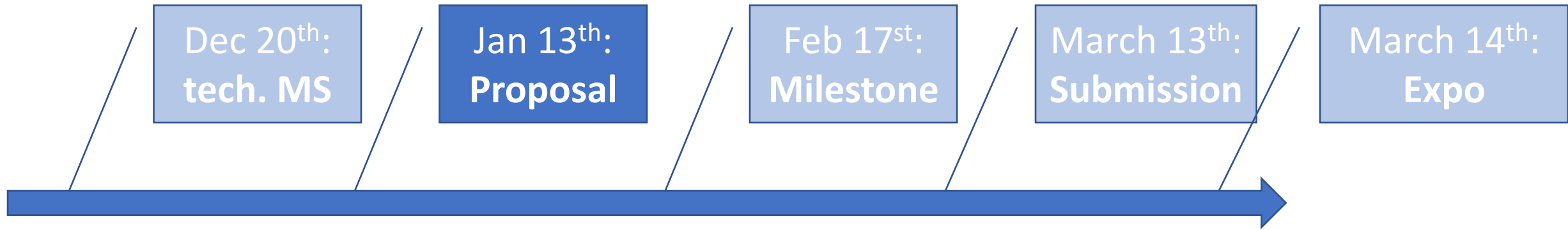
Technical milestone:

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

Via google form



Timeline

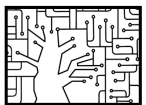


A PDF document (part of the final grade)

Project Proposal Doc

- Problem statement/Motivation
- Related work
- Proposed method
- Possible pitfalls
- Data
- Planned evaluation

2 pages + references

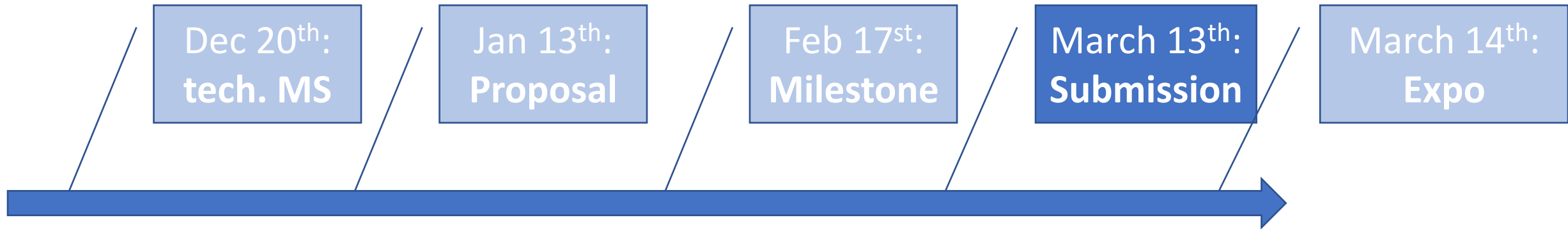


Timeline



- **Preliminary** Results
- Rising Flags

Timeline



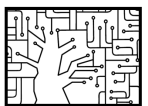
3-5min video + final report

NO EXTENSIONS!

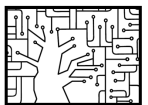
Final Report Doc

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

3-4 pages + references



Final project example





Explainability of Deep Neural Networks for 3D Point Clouds

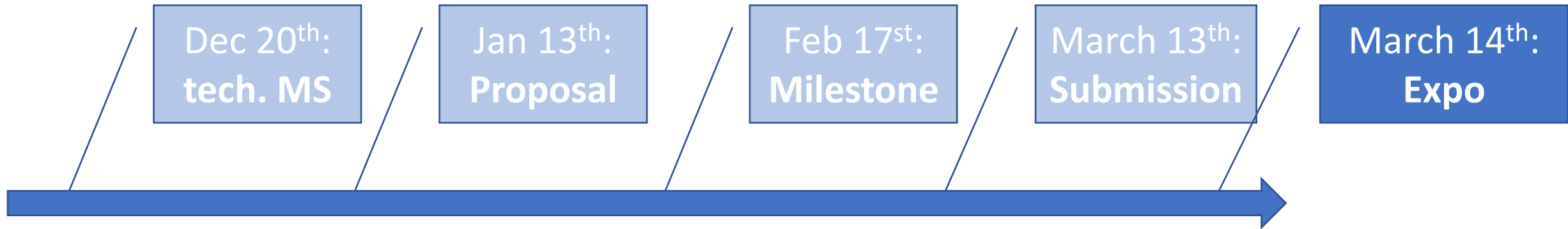


Michal Skoury, Hodaya Koslowsky, Yuval Belfer

Supervised by Dr. Meirav Galun and Dr. Tali Dekel

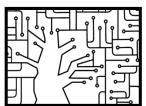
Some of the slides are from the lectures in this course

Timeline



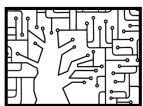
Present All projects + short Q&A

All morning, attendance is mandatory.



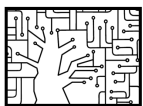
Supervision

- 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



Questions?

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

