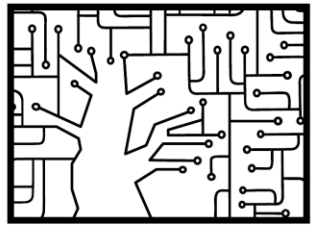
# Final Project:
# What, how, and when

Shai Bagon



# 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



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# 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



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# 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



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# 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?

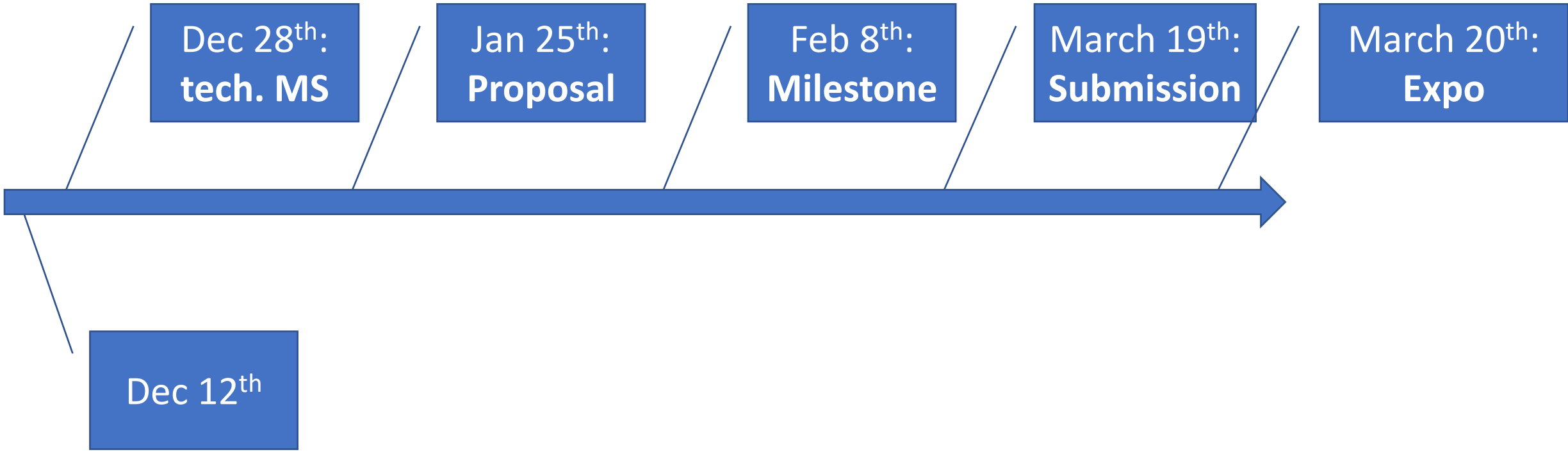
# Inspiration

Papers from leading conferences:
CVPR, ICCV, ECCV, ICLR, NeurIPS, ICML

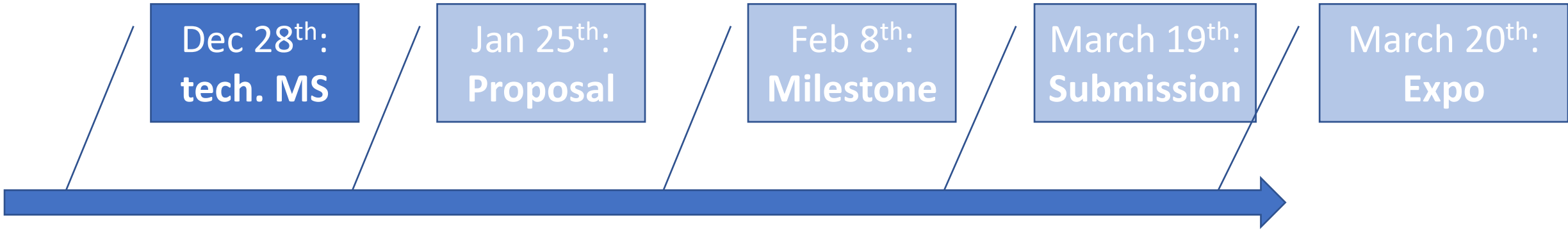
Additional sources:

Papers with code, Kaggle

# Timeline


Dec 28th: **tech. MS**
Jan 25th: **Proposal**
Feb 8th: **Milestone**
March 19th: **Submission**
March 20th: **Expo**
Dec 12th

# Timeline

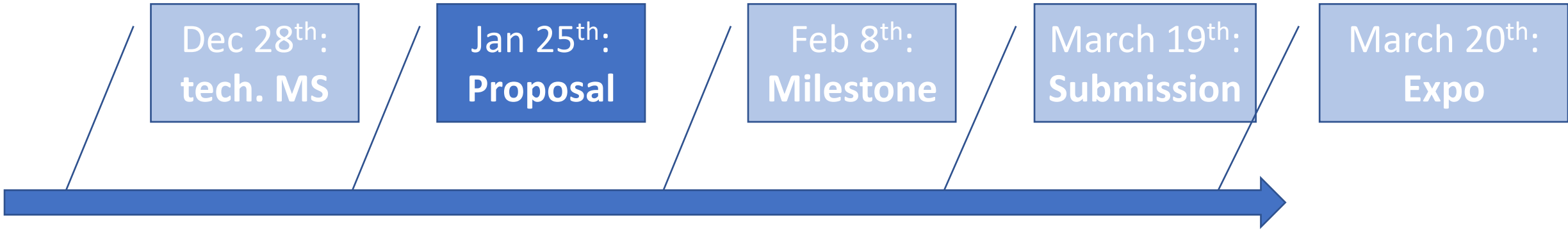



Technical milestone:

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

Via google form

# Timeline




A PDF document (part of the final grade)

# Project Proposal Doc

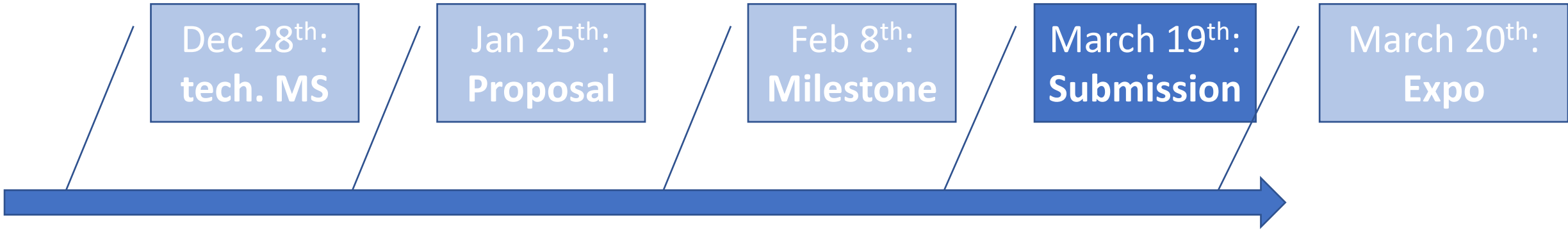
- Problem statement/Motivation
- Related work
- Proposed method
- Possible pitfalls
- Data
- Planned evaluation

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”

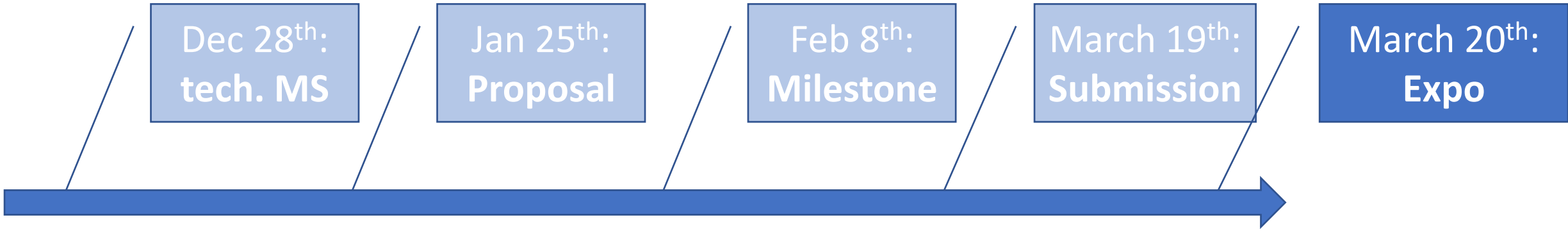
3-4 pages + references

# Final project example

# 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

# 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…



http://cs231n.stanford.edu/slides/2021/discussion_3_project.pdf