Fall 2023
CS 598 LAZ

Computer vision:
What will stand
the test of time?

What's this all about?

Computer Vision: Looking Back to Look Forward

Svetlana Lazebnik

Georgia Tech IRIM Short Course

Spring 2020

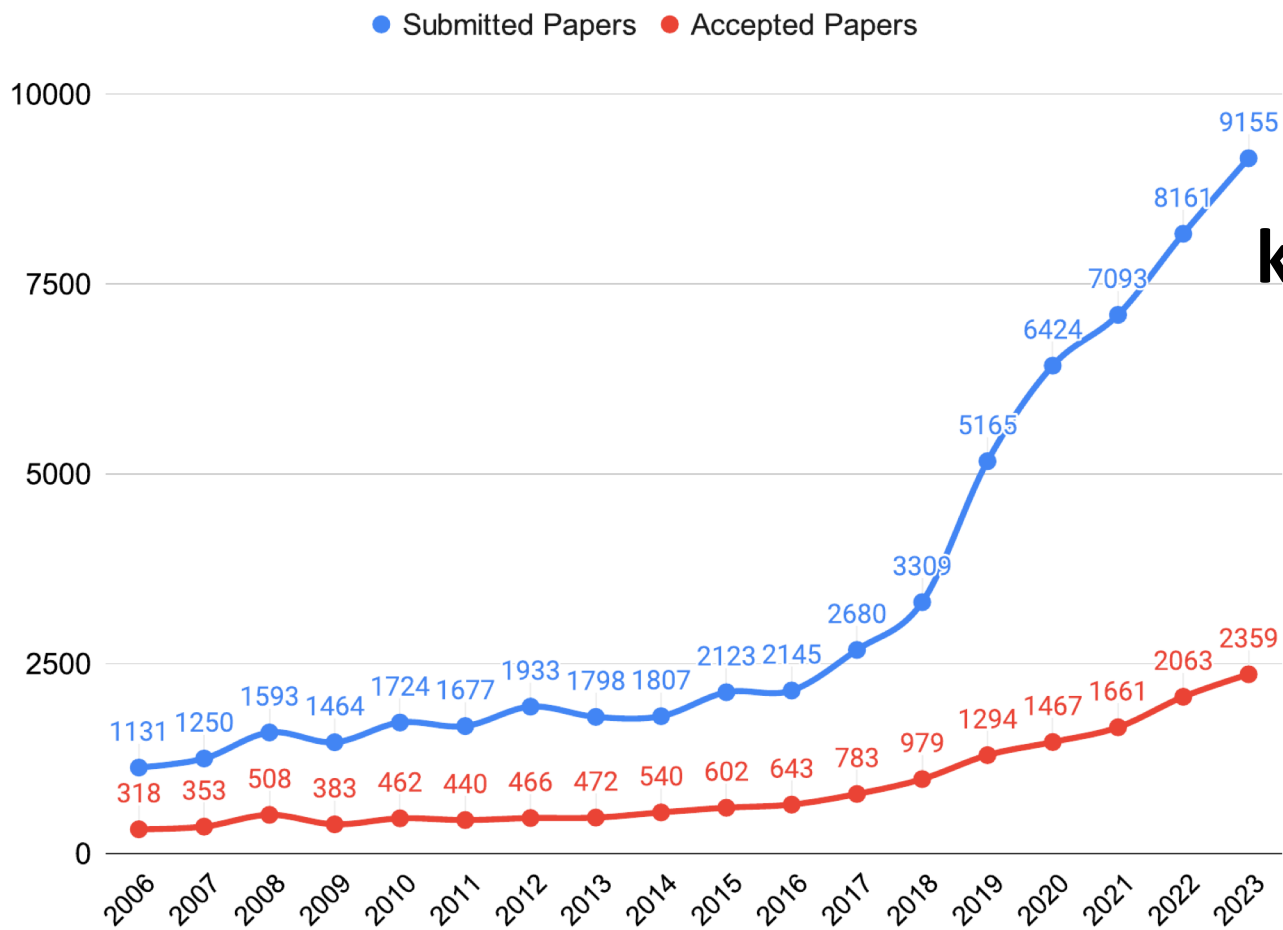http://slazebni.cs.illinois.edu/spring20/

Right before COVID hit…

a corgi's head depicted as an explosion of a nebula

Since then,
AI kept on advancing…

CVPR
kept on growing...
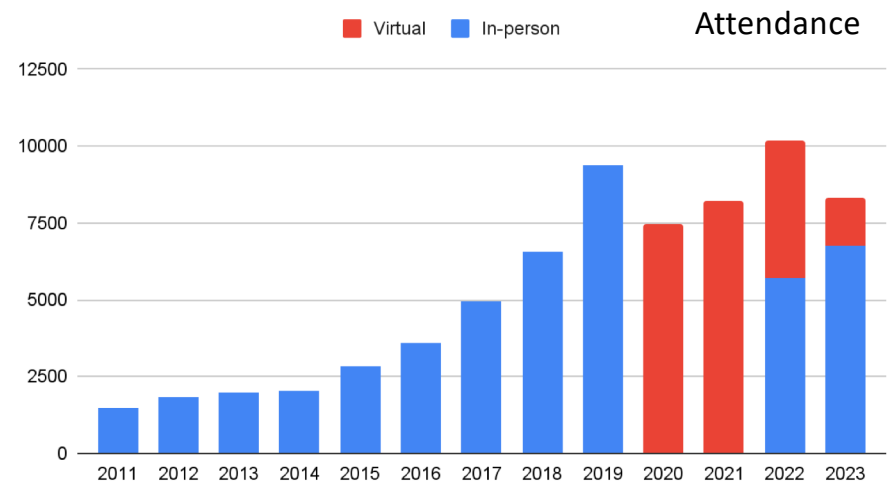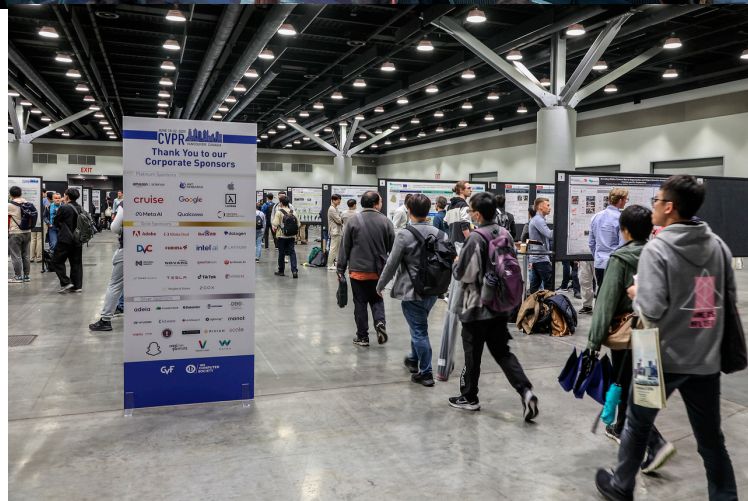
Source: CVPR 2023 opening slides

CVPR
kept on growing...

Attendance

Legend: Virtual (red), In-person (blue)

Year	Attendance
2011	~1500
2012	~1800
2013	~2000
2014	~2050
2015	~2850
2016	~3600
2017	~5000
2018	~6600
2019	~9400
2020	~7500 (Virtual)
2021	~8200 (Virtual)
2022	~10200 (In-person ~5700, Virtual above)
2023	~8300 (In-person ~6800)

Academics are starting to get worried...

Choose Your Weapon:
Survival Strategies for Depressed AI Academics

Julian Togelius and Georgios N. Yannakakis*

April 14, 2023

Abstract

Are you an AI researcher at an academic institution? Are you anxious you are not coping with the current pace of AI advancements? Do you feel you have no (or very limited) access to the computational and human resources required for an AI research breakthrough? You are not alone; we feel the same way. A growing number of AI academics can no longer find the means and resources to compete at a global scale. This is a somewhat recent phenomenon, but an accelerating one, with private actors investing enormous compute resources into cutting edge AI research. Here, we discuss what you can do to stay competitive while remaining an academic. We also briefly discuss what universities and the private sector could do improve the situation, if they are so inclined. This is not an exhaustive list of strategies, and you may not agree with all of them, but it serves to start a discussion.

https://arxiv.org/pdf/2304.06035.pdf

Academics are starting to get worried…

CVPR 2023 workshop

ICCV 2023 workshop

https://sites.google.com/view/academic-cv/

https://gkioxari.github.io/Tutorials/iccv2023/

What's this all about?

What this class is NOT about
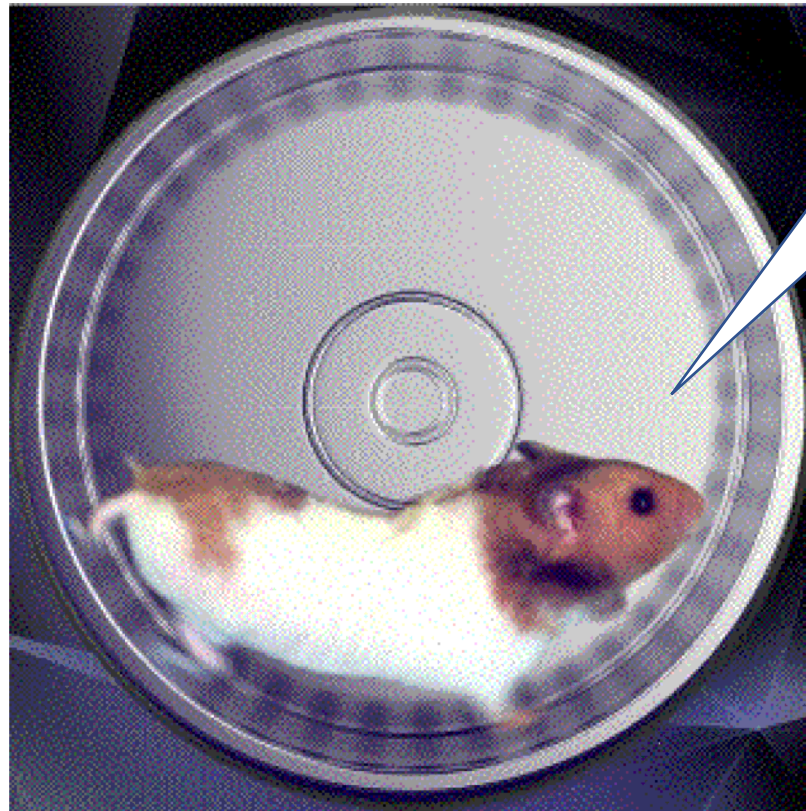
How to run faster?

What this class IS about

Class details

- Webpage: https://slazebni.cs.illinois.edu/fall23/
- Reading list

Requirements

- Participation: 20%
- Group presentation: 40%
- Group project: 40%

Group presentation: Possible formats

- Historical overview or survey of a specific sub-field or research area
- "Deep dive" into the work of a specific thinker or researcher (or small number of researchers)
- "Deep dive" into a famous book or paper (or small group of papers)
- Overview of a contentious issue or question with multiple viewpoints represented
- Polemical presentation -- argue a specific point of view, such as "Peer review should be abolished" or "Benchmarks are holding back computer vision research"
- Debate!

Group presentation: Requirements

- **Signup – by the end of *next Monday, August 28th*!**
- Outline and reading list (10% of presentation grade)
  - By the start of the *week before* you're scheduled to present
- Practice presentation (20% of grade)
- Slides (30% of grade)
- In-class presentation (40% of grade)

Group project: Possible formats

- Implementation or demo
- Original findings (from surveys, interviews, data analysis, other research)
- Survey or tutorial paper
- Position paper
- Polemical essay
- Policy white paper

Group project: Requirements

- Proposal (10% of project grade) – due in late September
- Progress report or first draft (10% of grade) – due in late October
- Final report (80% of grade) – due at the end of class

- **ChatGPT (or similar AI assistant) policy:** can be used, but ***must be documented***
  - See class webpage for details