



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...**

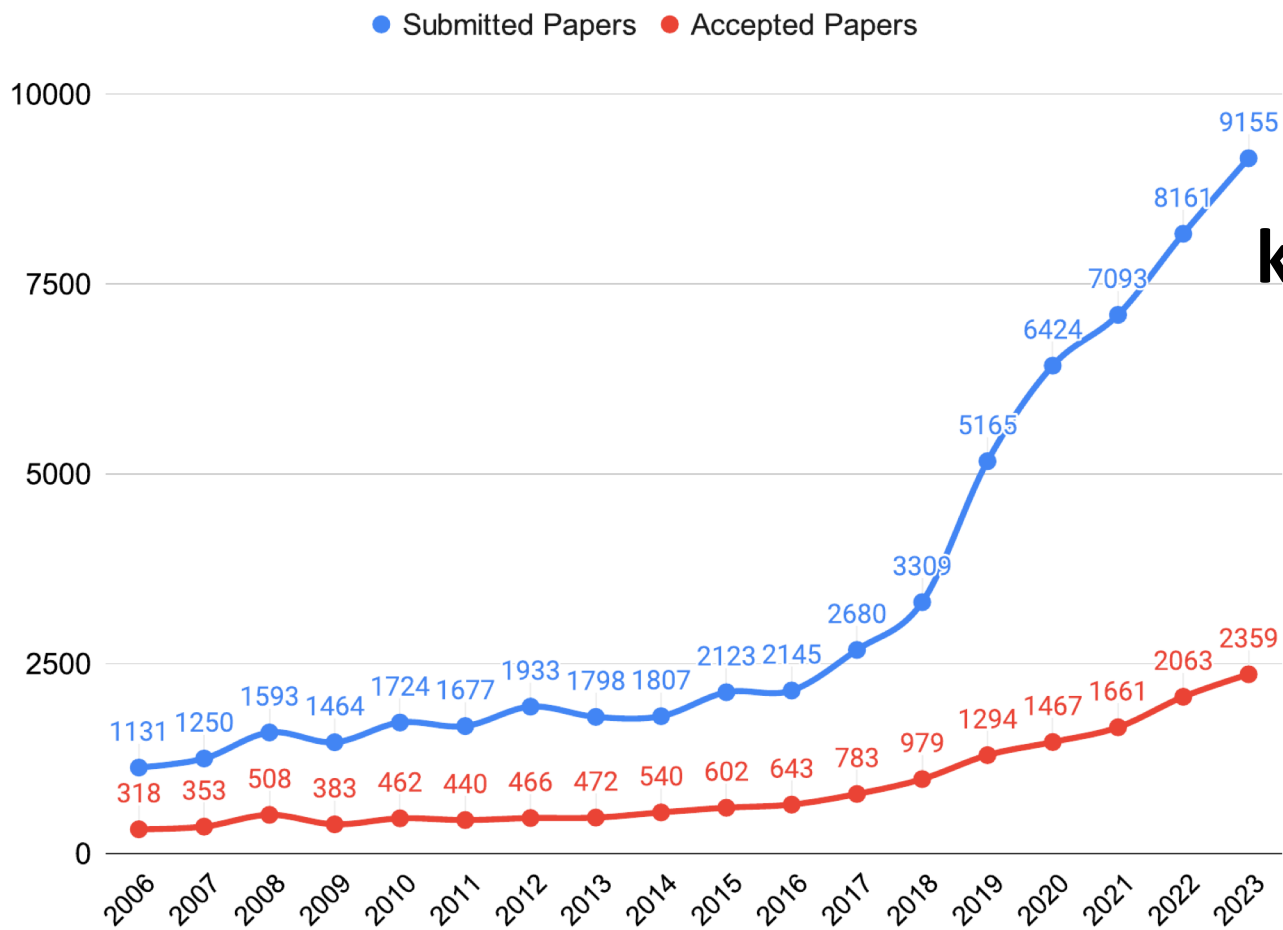




a corgi's head depicted as an explosion of a nebula

**Since then,
AI kept on advancing...**

<https://openai.com/dall-e-2>

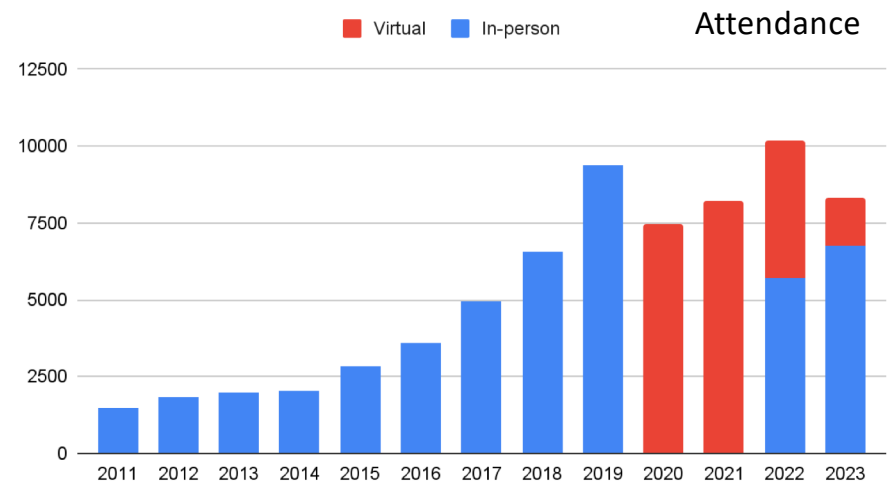
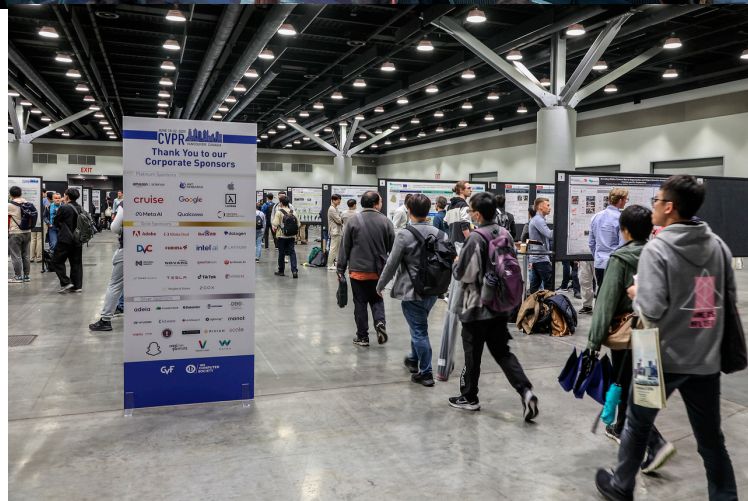


CVPR
kept on growing...

Source: [CVPR 2023 opening slides](#)



CVPR kept on growing...



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




**Scholars & Big Models:
How Can Academics
Adapt?**

*Date: June 19, 12:45 PM PDT
East Exhibit Hall B + Zoom*

A forum to discuss ways the academic community can adapt and continue to thrive

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

ICCV 2023 workshop



QUO VADIS, COMPUTER VISION?

AT ICCV 2023

What is QVCV?

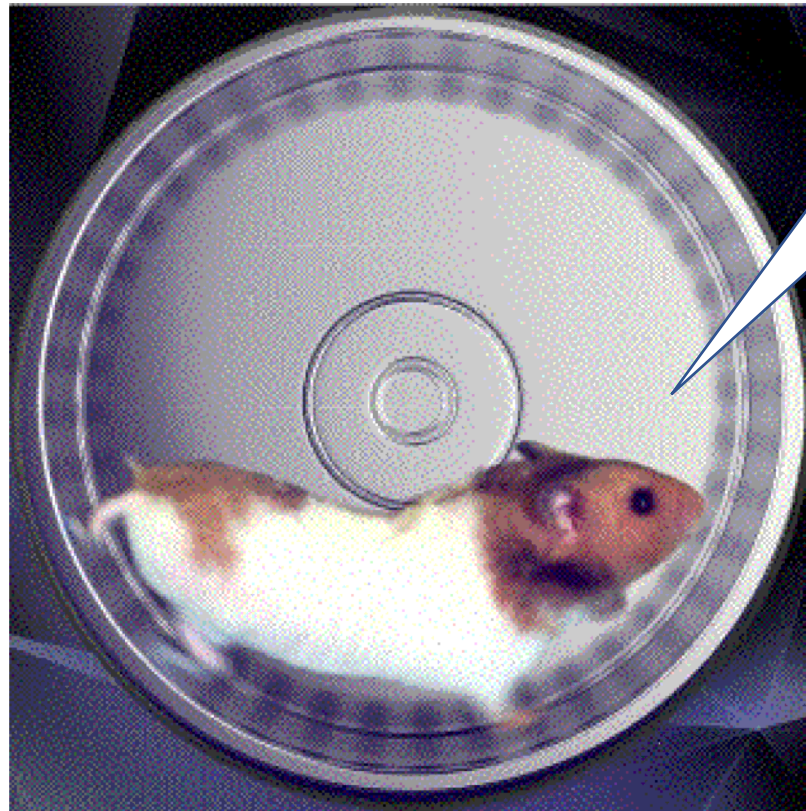
Computer vision is at an inflection point. The triumph of massive generative models is having a multi-faceted impact on our community. On one hand, the advent of these models has opened up new avenues of research and generated new challenges, making the field even more exhilarating. The field is experiencing a significant influx of new researchers and engineers eager to build on these recent breakthroughs, and the industry is driving towards the development of end-user products. On the other hand, the rapid pace of progress and fear of not keeping up with key developments is leaving researchers uncertain about which problems to tackle next. It's likely that a significant proportion of computer vision researchers are undergoing a type of "existential crisis" currently, and that's why we believe a workshop would provide an excellent opportunity to address and discuss this new state of affairs.

<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