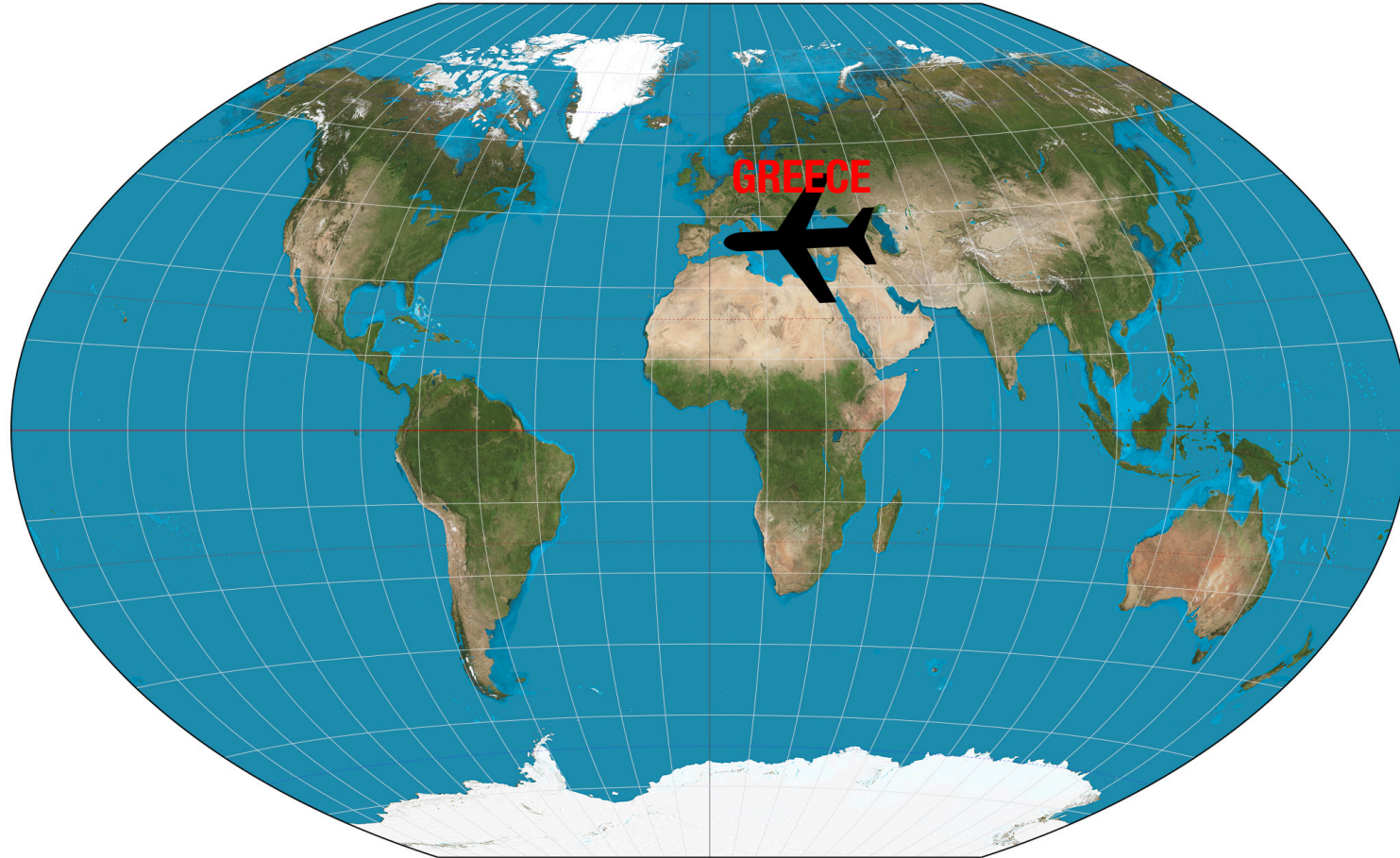


Being Open

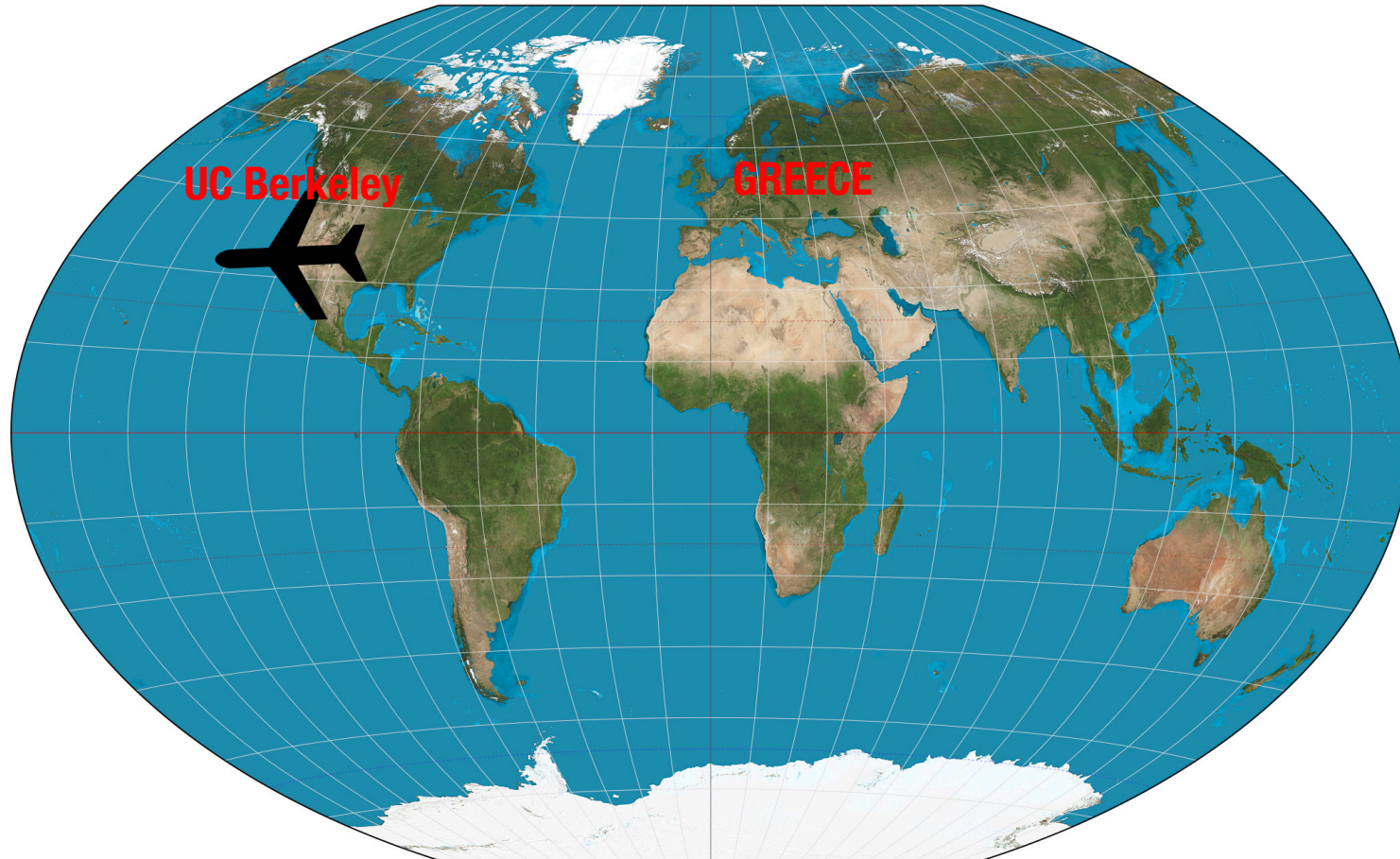
Georgia Gkioxari

Background

Background



Background



Background

- 2010: Greece → UC Berkeley
- 2016: PhD with Jitendra Malik
- 2016-2018: PostDoc at FAIR
- Now: Research Scientist at FAIR

Background

- I have written **non deep learning** papers
- I have had my papers **rejected**
- Many of my research ideas **did not work**
- I have collaborated with **more than 20 people** (UC Berkeley, FAIR, Google, INRIA, Georgia Tech, CMU, ...)
- I have served on many **program committees**
- I have served as an **area chair** for CVPR 2018
- I try **not to think** about research one day a week
- I value a healthy **work/life balance**

Principles of Research

Quality

Your work reflects yourself and subsequently your community

Principles of Research

Quality

Honesty

- We operate on the assumption that everybody is honest
- Utopian society
- It is our responsibility to preserve this

Principles of Research

Quality

Honesty

Openness

- We share papers, code, models, dataset
- We collaborate

Principles of Research

Quality

Honesty

Openness

- We share papers, code, models, datasets (**open-sourcing**)
- We collaborate (**collaborations**)

Part A: Open-Sourcing

Examples of Open Source Projects

Datasets

PASCAL VOC, ImageNet, MS COCO, ...

Libraries

VLfeat, Caffe(2), (Py)Torch, Tensorflow, ...

Models

DPM, AlexNet, R-CNN, ResNe(X)t, Mask R-CNN, ...

Open-sourcing

A scientific community without open-sourcing:

- Every group has to collect their own dataset
(~1 year to collect/annotate/curate ImageNet)
- Every group has to (re)implement and (re)train their own models
(~ 1 year to implement Caffe from scratch)
+ (~ ½ year to implement and test ResNe(X)t)
= 2 ½ years to implement a baseline (almost half a PhD career)

Open-sourcing

Is this **progress**?

- Benchmarking & comparisons become impossible
- Baseline implementations become noisy/inaccurate
- Not all groups have the resources to do this

→ **chaos**

Incentives for Open-sourcing

Short term

- CVPR publications should be accompanied by code & models
- Community awards for Best Open-Source Projects
- Citation/star counts for open source projects
- Professors, group leads, companies should reward open-sourcing

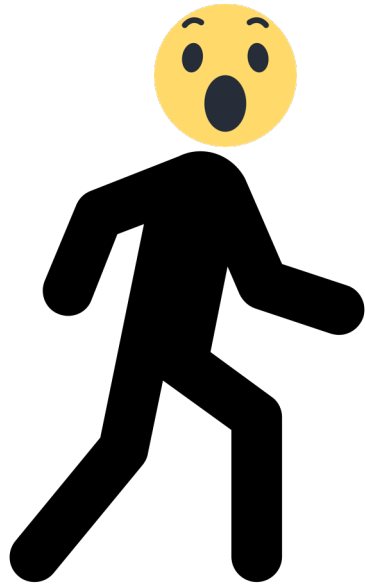
Long term

- Career evaluations (i.e. tenure, promotions) should be based on open source projects

Part B: The merits of collaborating

Collaborations

Collaborations for researchers are the equivalent of travelling



Collaborations

Collaborations for researchers are the equivalent of travelling



Collaborations

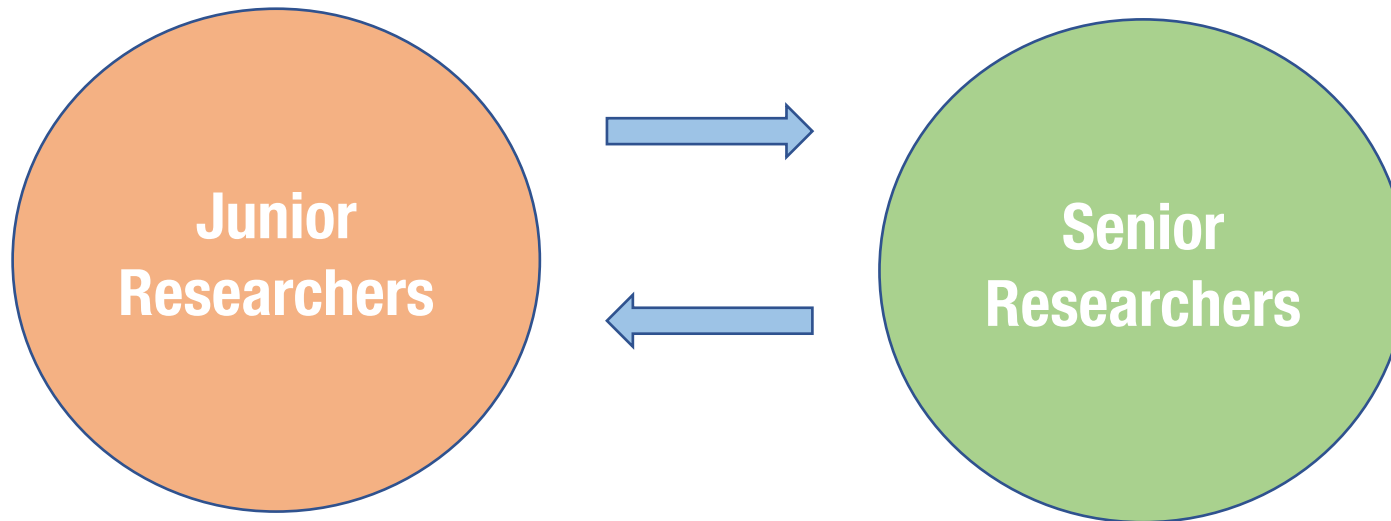
Collaborations for researchers are the equivalent of travelling

- You open your research horizon
- You get to experience different work styles
- You learn to listen, argue and adjust
- You learn to work with different personalities
- You usually get exposed to different set of problems

→ **growth**

Collaborations

Collaborations are bidirectional



The merits of Collaborating

For **Junior Researchers**

- They learn to work in a different environment
- They experience different work styles than their PhD advisor
- It's a chance to work in different topics
- They mature

For **Senior Researchers**

- They get to train the next generation of scientists

Incentives for Collaborations

- Explicitly reward collaborations during career evaluations
- Reward collaborative projects outside ones comfort zone (high-risk projects)
- Cross-university or university-industry student co-advising

Conclusions

A good citizen of CVPR is the one that pushes the field forward

- High quality research work
- Bringing researchers closer together
- Sharing with the community

If you are a junior scientist, be open to collaborations with peers

If you are a senior scientist, mentor juniors