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The Startup: An Academic's Rite of Passage ?

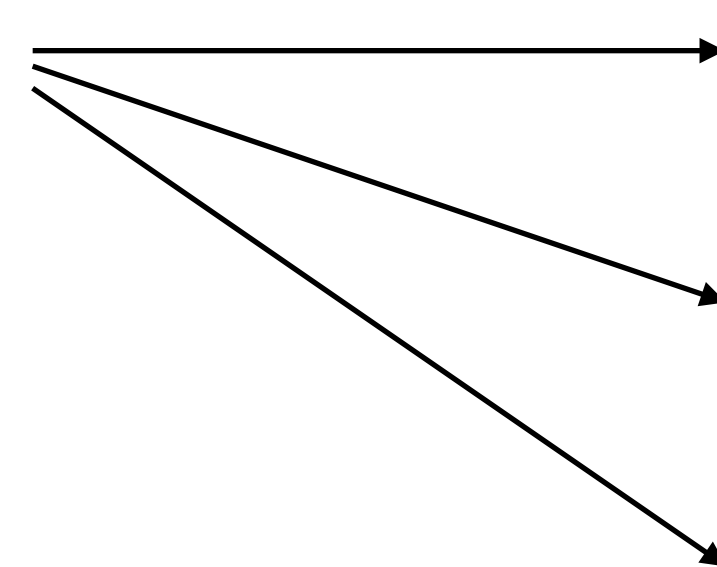
Prof. George Candea



ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE



COMPUTER AND
COMMUNICATION SCIENCES



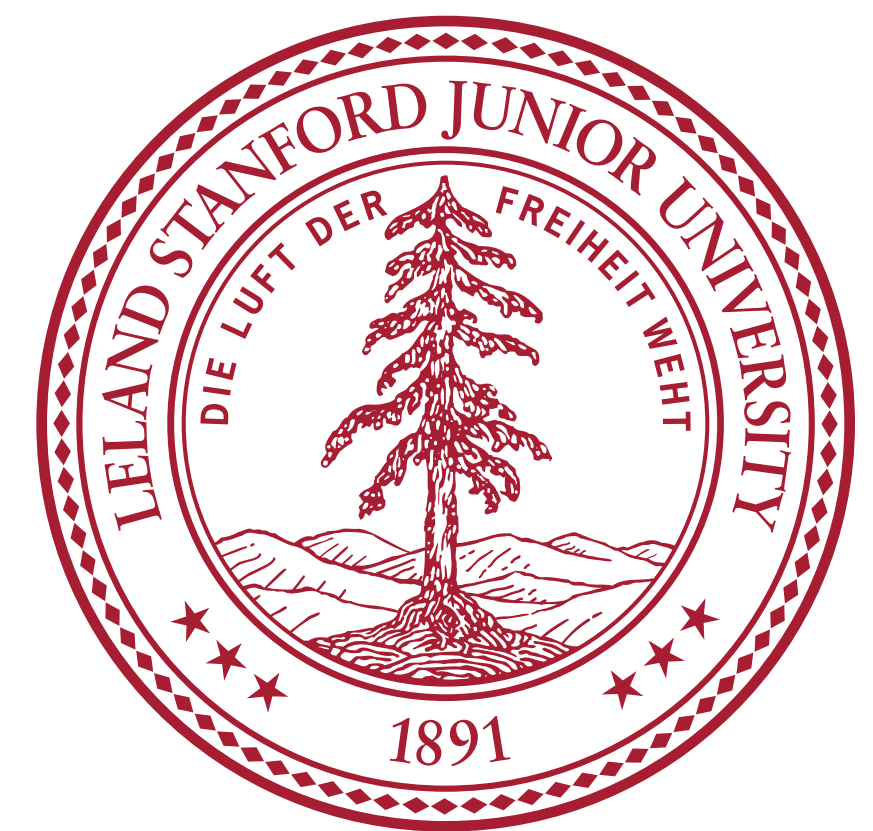
Academia

Industry

Academic entrepreneurship

- 39,900 companies since 1930
- 5.4 million jobs
- \$2.7 trillion in annual revenue

=> world's 10th largest economy





- started in 2005
- 3 x Stanford PhD students
- first to build a data warehouse running on commodity hardware
- commercialized research in databases and reliable systems
- acquired by Teradata 2011
- Teradata Analytics line of products

- started in 2015
- 4 x EPFL PhD students + 1 prof
- cybersecurity product focused on data protection
- commercializes research in software security and analysis
- R&D in Innovation Park, office in USA
- founders are executive team

Pros/Cons

- **Pro #1: Play a new game**
- **Pro #2: Acquire new skills**
- **Con #1: Sucks up all you've got**
- **Con #2: It's a full-contact sport**
- **Pro #3: Directly help people**

Pro #1: Play a new game

- Ideas ↔ Dollars
- Academic culture ↔ Business culture
- Need ↔ Want

In business you don't get what you deserve, you get what you negotiate.

Chester L. Karrass

● big data
Search term

+ Compare

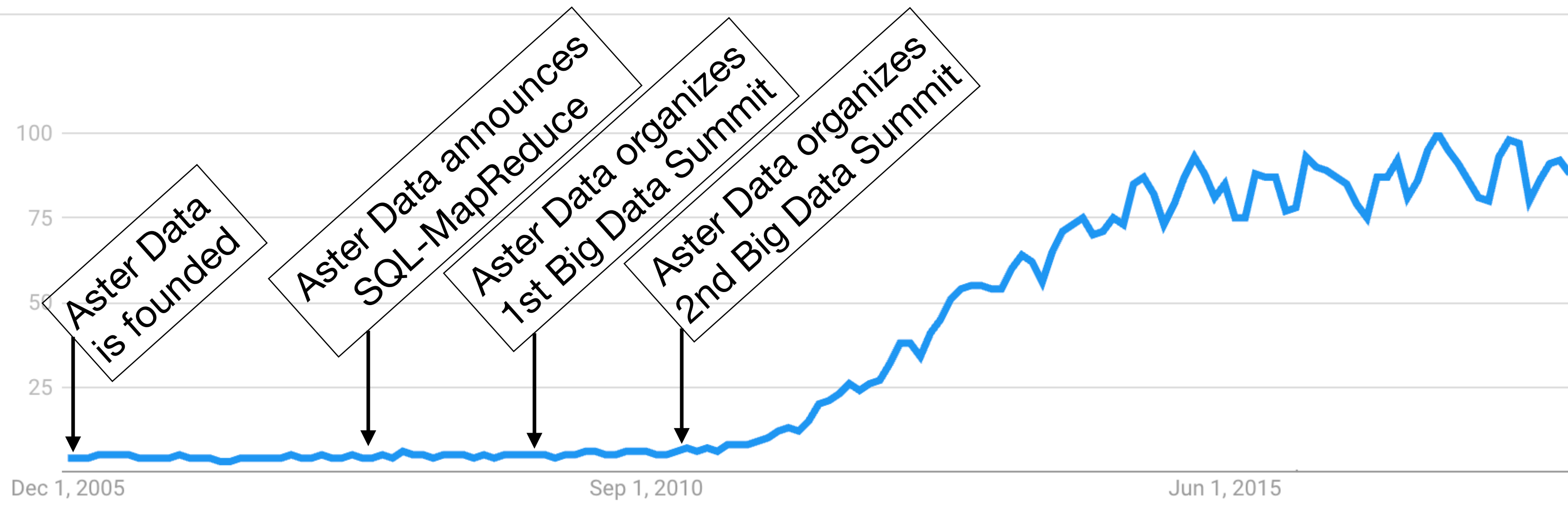
Worldwide ▾

12/1/05 - 5/1/18 ▾

All categories ▾

Web Search ▾

Interest over time ?



Pro #2: Acquire new skills

- Do many things you've never done before
 - Find, attract, and close customers
 - Find, attract, and manage investors
 - Find, attract, and retain business and engineering talent
 - Set up engineering processes
 - Manage the engineering team
 - Deal with contracts, patents, and other legalese
 - Do sales and marketing
 - IT administration
 - HR / personnel
 - Bookkeeping and financial management
 - ...

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9:00 Code Python script to automate virus signatures acquisition from VirusTotal
10:30 Discuss company finances
11:00 Prototype Kibana dashboard
12:30 Call w/ lawyer in London (1 timezone away)
13:30 Brainstorm product-market fit w/ a friend product manager in Boston (6 timezones away)
15:00 Coffee with engineering candidate who has competing offers from other software companies
16:30 Call w/ customer in Chicago (7 timezones away)
18:00 Pitch to a potential investor from Silicon Valley (9 timezones away)
19:00 Put together a 360-degree review system for employees

Pro #2: Acquire new skills

- Do many things you've never done before
- Identify & communicate the essence
 - Pitch product to customers
 - Pitch company to investors

Pro #2: Acquire new skills

- Do many things you've never done before
- Identify & communicate the essence
- Develop & communicate vision

If you want to build a ship, don't drum up people to collect wood and don't assign them tasks and work, but rather teach them to long for the endless immensity of the sea.

Antoine de Saint-Exupery

Con #1: Sucks up all you've got

- Consumes your energy and personal life
- Not always fun
- Advice: Do it full-time not part-time
- Advice: Time it properly
- Advice: Start it when ready to execute

Con #2: It's a full-contact sport

- Forces you into making hard choices
- Creates acrimony where there was none
- Company stops being yours on day #1
- Beware of conflicts of interest

**It takes 20 years to build a reputation
and five minutes to ruin it.**

Warren Buffett

Pro #3: Directly help people

- Solving people's problems creates self-worth
- Can cure mid-career crisis
- Customer buy-in is a clear metric for success

Conclusion

- **Pro #1: Play a new game**
- **Pro #2: Acquire new skills**
- **Con #1: Sucks up all you've got**
- **Con #2: It's a full-contact sport**
- **Pro #3: Directly help people**



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