TEACH: The Academic Symposium

MIT Stephen A. Schwarzman College of Computing Launch
February 27, 2019

The Illinois CS+X Programs

Rob A. Rutenbar

Dept of Computer Science**
University of Illinois

(**Former role.
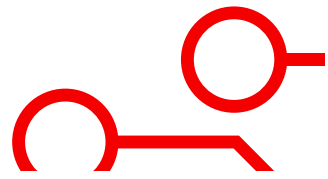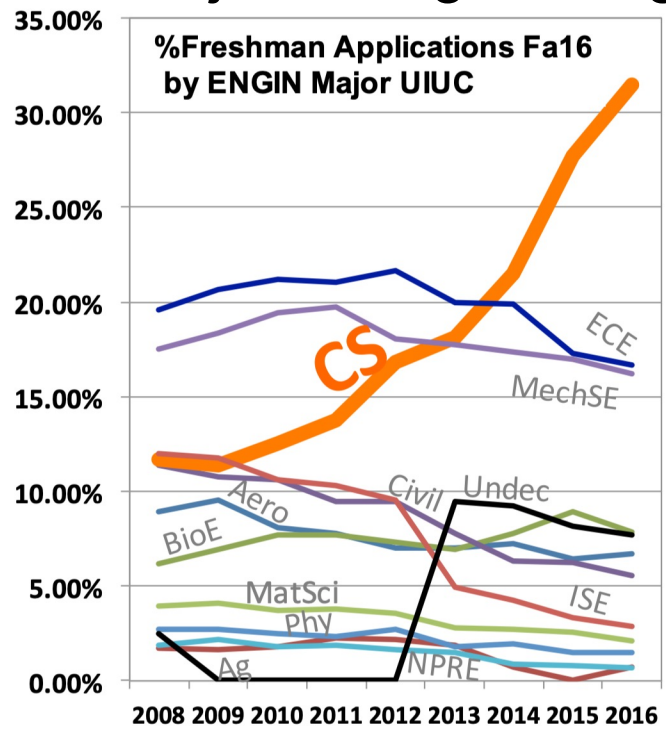   Currently, SVC Research, University of Pittsburgh)

I ILLINOIS
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN
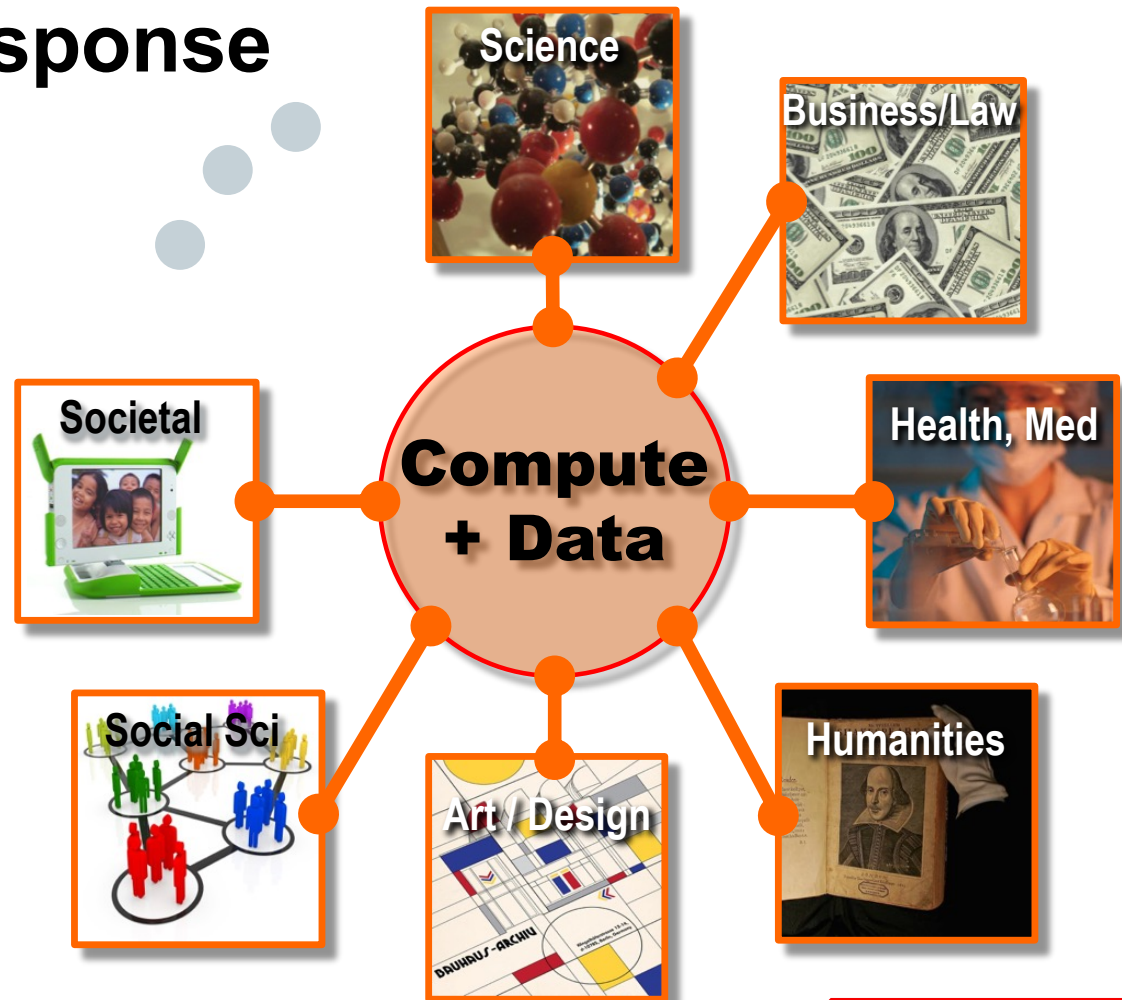
Everybody Starts With This CS Landscape….

- This is this **Illinois CS** major in Engineering

%Freshman Applications Fa16 by ENGIN Major UIUC

CS, ECE, MechSE, Aero, BioE, Civil, Undec, MatSci, Phy, ISE, Ag, NPRE
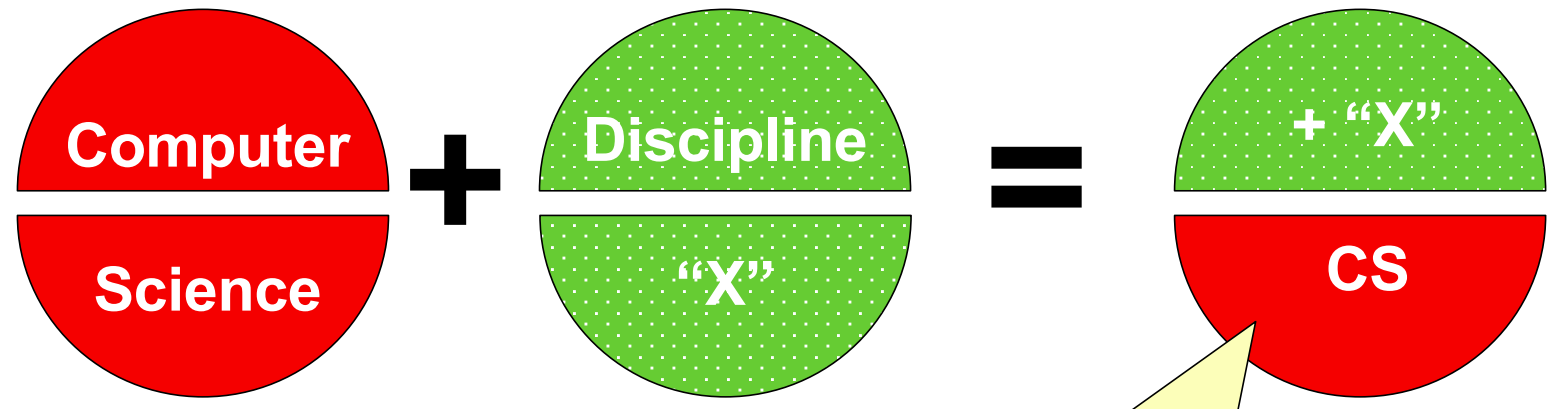
CS+X is a Novel Response

- Yes, go **DEEP**….
  - More classes, faculty, etc

- But also go **WIDE**
  - Partner with non-CS dept's
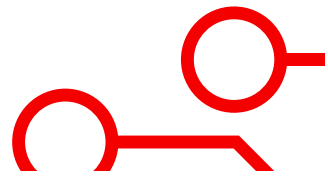 - Build a different class of **cross-educated** students

Science

Business/Law

Societal

Compute + Data

Health, Med

Social Sci

Art / Design

Humanities

Illinois CS+ Degrees

- They are *not*:   Minor in CS/X. Dual degree.
- They are: CS(1/2) + X(1/2)= Bachelors in CS+X, owned by Dept X
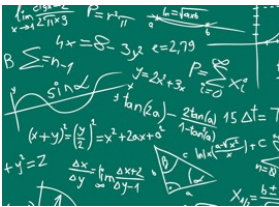

Same CS core classes for all **+X**

Illinois CS+X: Starting Portfolio

CS+Math

CS+Statistics
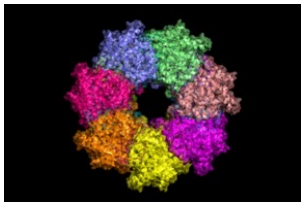
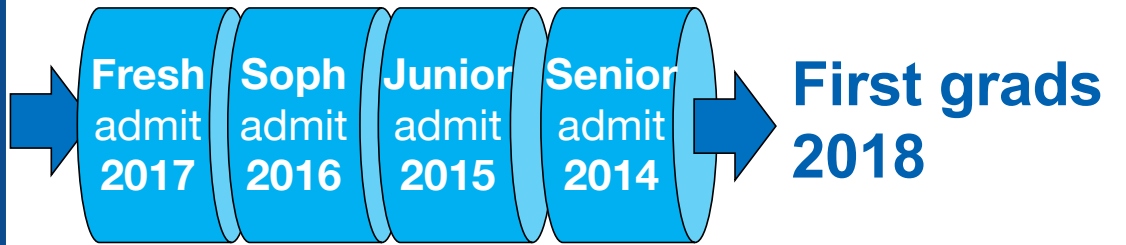} Legacy degrees, decades old

CS+Anthropology

CS+Astronomy

CS+Chemistry

CS+Linguistics

Design started in 2010,
approved 2013, admits 2014

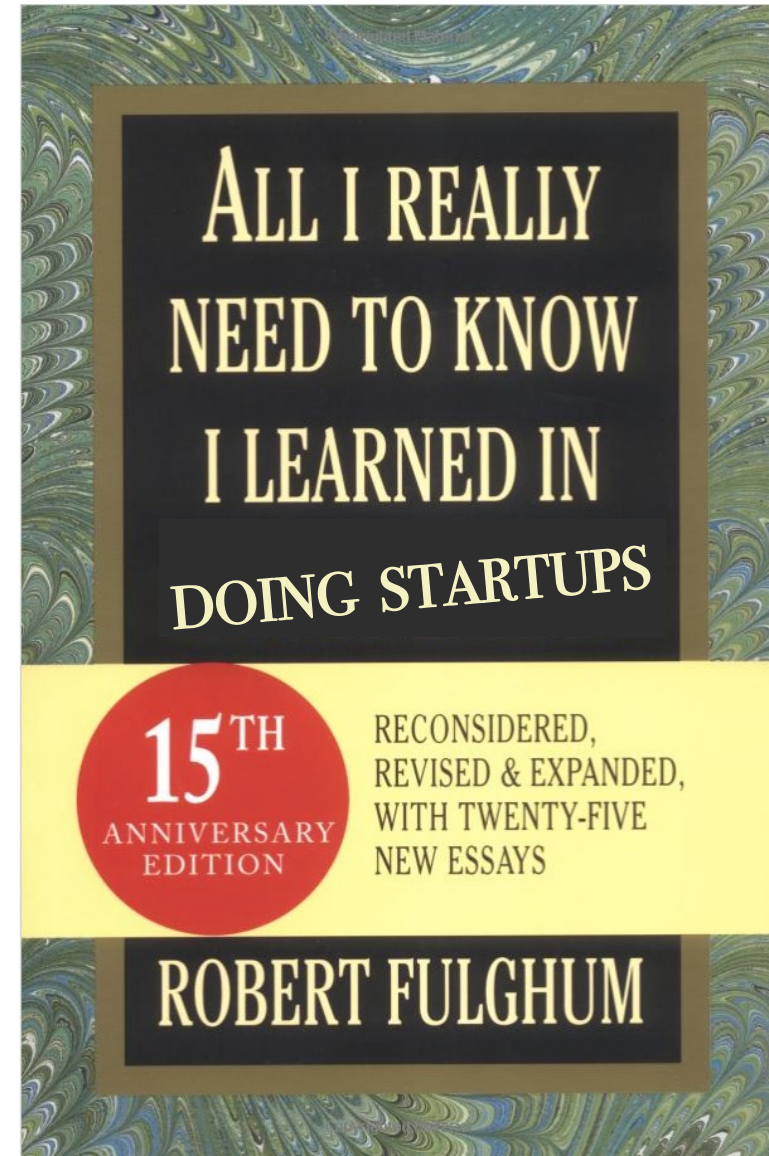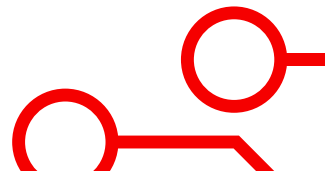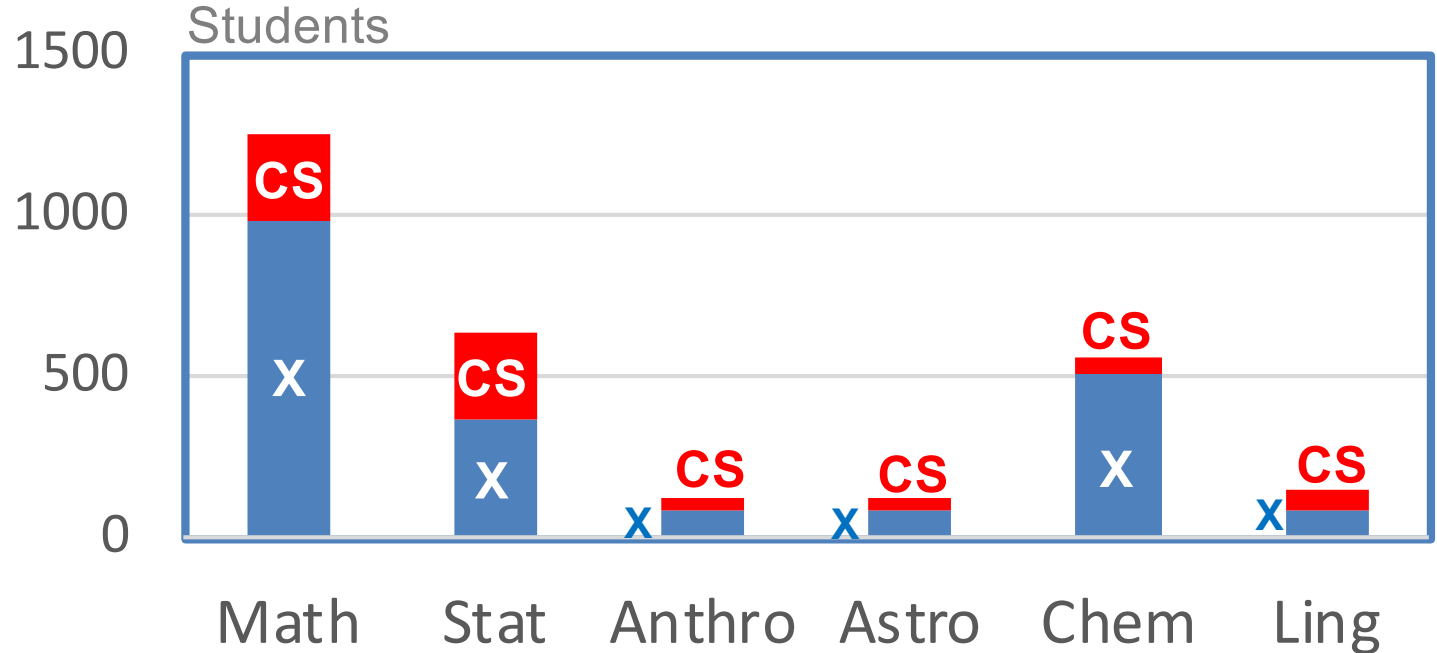| Fresh admit 2017 | Soph admit 2016 | Junior admit 2015 | Senior admit 2014 |

First grads 2018

UIUC CS+X: Design Principles

- **Time-To-Market matters**
  - Optimize to get approvals **fast**

- **Minimum viable degree**
  - CS core courses for all X's = **same**

- **First pitch: Just like Sand Hill Road**
  - Value prop, team, $$, etc: **15 mins**

- **Need "early adopter" customers**
  - Partner X's & faculty **inside X**

- **Need a business model early**
  - **CS+X** is like ENG: **Tuition differential**

ALL I REALLY NEED TO KNOW I LEARNED IN DOING STARTUPS

15TH ANNIVERSARY EDITION

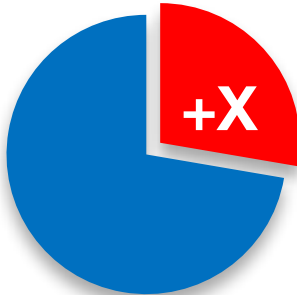RECONSIDERED, REVISED & EXPANDED, WITH TWENTY-FIVE NEW ESSAYS

ROBERT FULGHUM

Illinois CS+X: Enrollment

- CS+X students are a serious part of **many Illinois depts** today
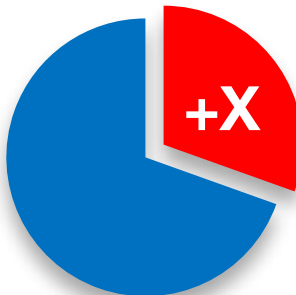- But absolute numbers is not the full story…
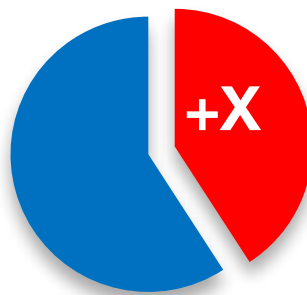
Illinois CS+X: Traction

Anthropology

Astronomy

Statistics

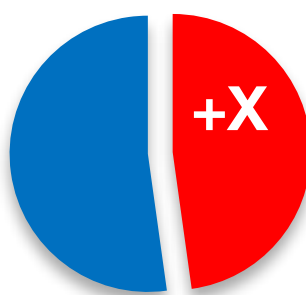**Linguistics**

~28%

Of students

~30%

Of students

~41%

Of students

~48%

Of students

Today: Rapid Expansion of +Xs at Illinois

CS+Math CS+Stats CS+Advert CS+GeoSci CS+AnimalSci

CS+Anthro CS+Astro CS+Music CS+Philos'y

APPROVING

CS+Chem CS+Linguist CS+CropSci CS+Econ

RUNNING **STARTING**