Welcome to CS8!

Instructor: Dave Abel
dabel@cs.brown.edu

Wednesday, January 27, 2016

Meet the Staff

TAs

‣ A resource to help you in the course:

   - Office Hours, Labs, Review Sessions, Email.

‣ Administrative questions:

   - HTAs (cs008headtas@cs.brown.edu)

‣ All other questions

   - UTAs (cs008tas@cs.brown.edu)

My Interests

Which CS Course is For You?

▸ CSCI0150/0160, CSCI0170/0180, or CSCI0190: Intro to programming and data structures relevant to potential CS concentrators.

▸ CSCI0931: Intro to applied CS relevant to Social Sciences/ Humanities.

▸ CSCI0040: Intro to programming relevant to Engineering/ Sciences.

▸ **http://cs.brown.edu/degrees/undergrad/ whatcourse.html**

CS8 Course Goals

1. Learn about the exciting field of computer science!

2. Learn a new form of thinking.

3. Learn a bit of programming:

   - Weekly programming assignments during Lab

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Course Structure

‣ 11 units

‣ One unit per week

- Lecture: Monday, Wednesday, Friday

- One homework per unit (first Homework is for Unit 1)

- One lab per unit (first lab is for Unit 2).

Topic Overview: First Half

1. Logic (*first homework)*

2. Programming (*first lab)*

3. Algorithms

4. Databases

5. Machine Learning (*midterm after ML)*

Topic Overview: Second Half

6. Computer Vision & Natural Language Processing

Topic Overview: Second Half
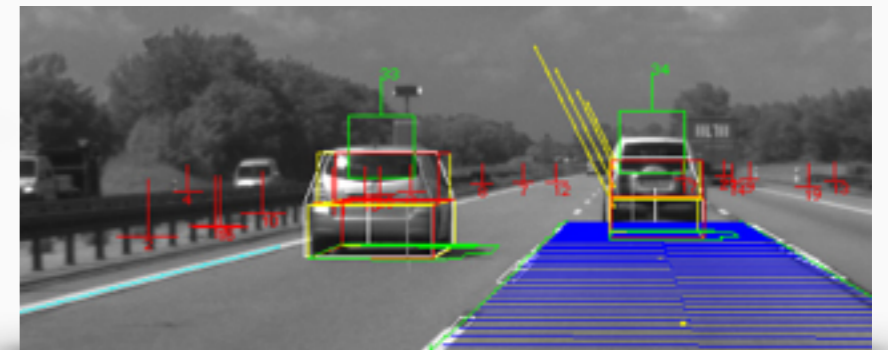
6. Computer Vision & Natural Language Processing

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7. Theory: Computability & Complexity

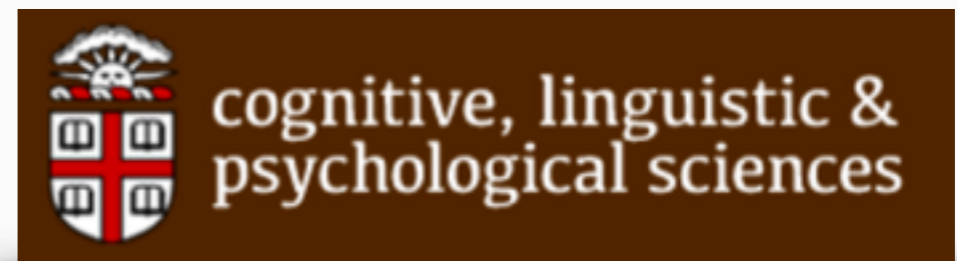8. Compression & Error Correcting Codes

9. Recursion

10. Cryptography

11. (BONUS) Applications

Guest Lectures

‣ Professors from other departments!

‣ Q: How does computer science affect your field?

Expectations

‣ Homework: short answer & conceptual questions

‣ Lab: programming (Scratch)

‣ Activity!

‣ Class: iClickers.

‣ Exams: Midterm and Final

- Tentatively: Monday 3/21 and Thursday 5/19
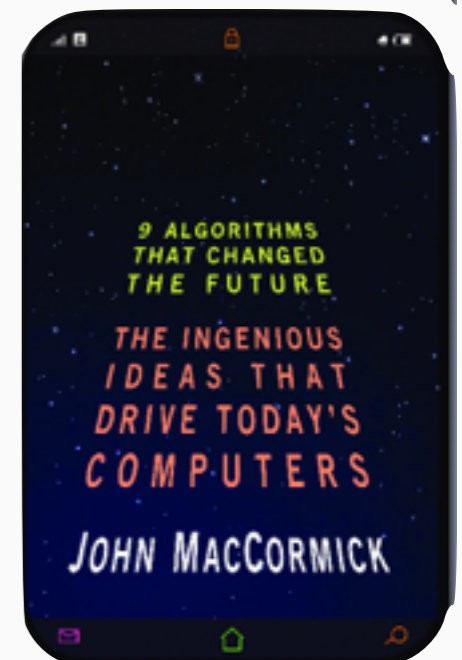
‣ End of term writing assignment

Grading

‣ Homework: 20%

‣ Lab: 30%

‣ Midterm: 15%

‣ Final Exam: 20%

‣ Final Writing Assignment: 5%

‣ Activity Participation: 5%

‣ Class Participation: 5%

Readings

‣ Course text: "*Nine Algorithms that Changed the Future*" by John MacCormick

‣ One reading per week.

‣ Supplements homeworks/labs/lecture.

‣ First reading: Syllabus + Collab Policy

Office Hours

‣ My hours: Monday & Friday, 11am-noon

- (Or by appointment)

‣ My office: CIT 321

‣ TAs: hours listed on the website/calendar!

- (At least 1 hour per day)

An Exciting Opportunity…

Telescope Science: A Parable[1]

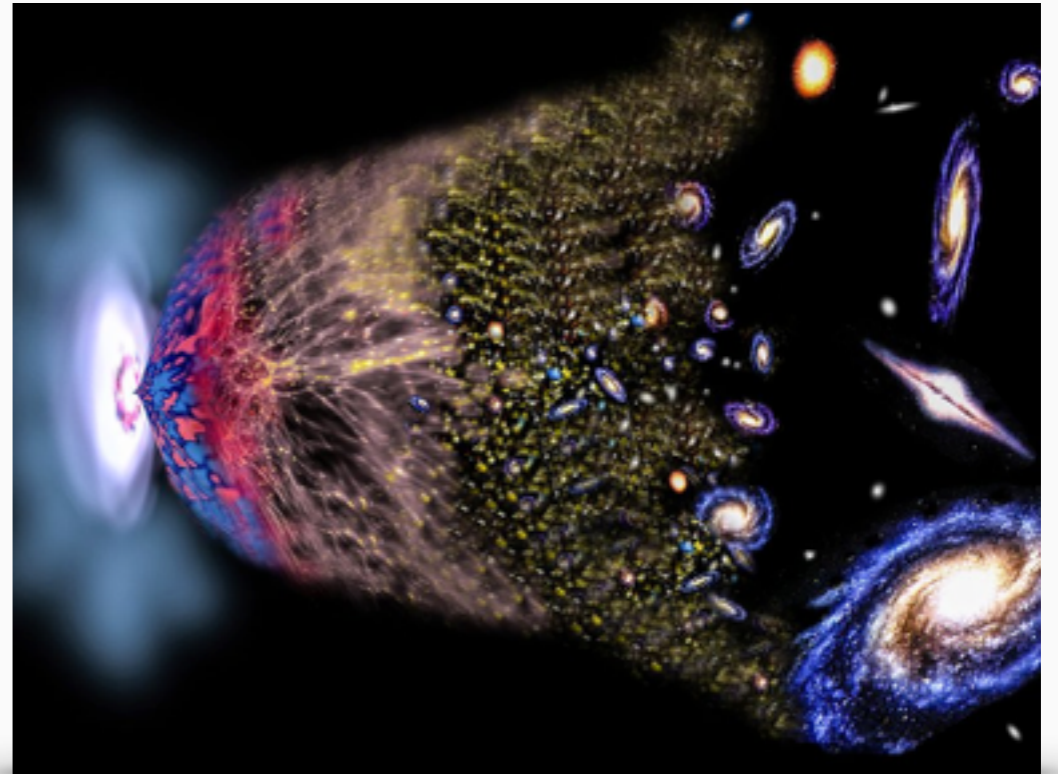1: Thanks to Michael Littman for this parable

Telescope Science: A Parable
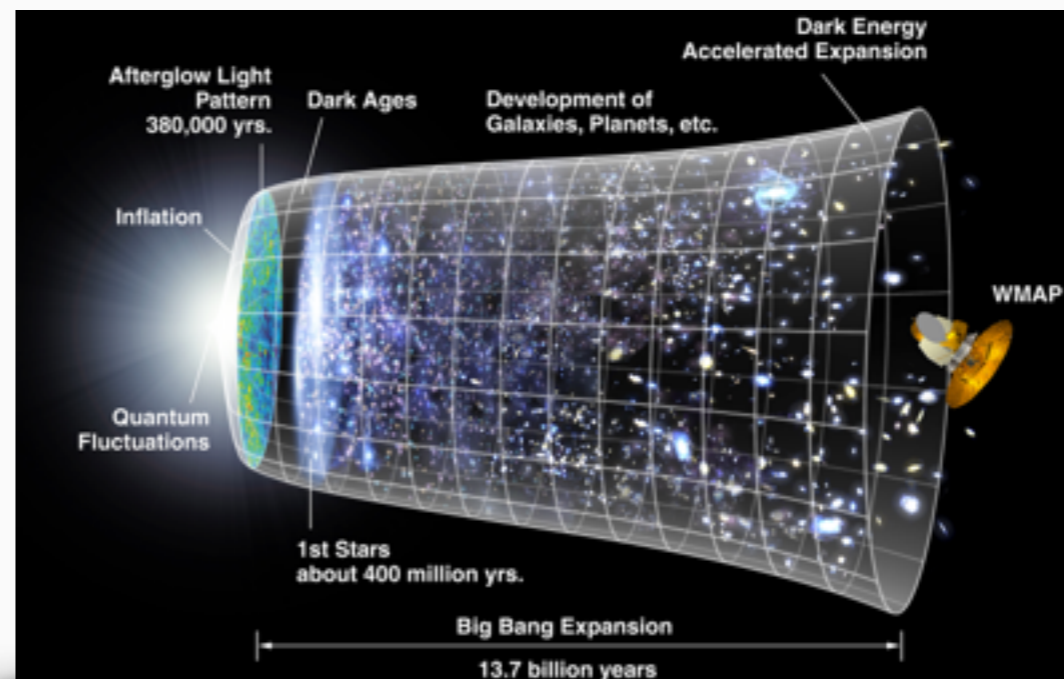
Telescope Science: A Parable

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In spite of the name, it was never really about the telescope. It was about understanding the physical universe

Telescope Science: A Parable

Similarly, *computer science isn't about the computer*.

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‣ **World Changing!**