CSC 2541: Sport Analytics

Raquel Urtasun

University of Toronto

Jan 9, 2017
Today

- Administration details
- Student introduction
- Challenges
Admin Details: Course Stuff

- Weakly Office hours (2h):
  - feedback about challenges/project/quizzes
  - Help preparing class presentations


Piazza: for most communications
[piazza.com/utoronto.ca/winter2017/csc2541](piazza.com/utoronto.ca/winter2017/csc2541)

Submissions: MarkUs
- If you don't have an account, act immediately!
  - Form to fill [https://docs.google.com/a/ttic.edu/forms/d/e/1FAIpQLSdrIXFZXoM0jrfyjCTjSlIoCsd8-7OvVSaWrlGpAQz3qA5OOw/viewform](https://docs.google.com/a/ttic.edu/forms/d/e/1FAIpQLSdrIXFZXoM0jrfyjCTjSlIoCsd8-7OvVSaWrlGpAQz3qA5OOw/viewform)
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Webpage of the course:

http://www.cs.toronto.edu/~urtasun/courses/CSC2541/CSC2541_Winter17.html
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R. Urtasun (UofT)  
CSC 2541: 01-Introduction  
Jan 9, 2017  
3 / 16
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Do I have the proper pre-requisites?
  ▶ Not going to check, but you need to be realistic
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  ▶ Linear algebra, calculus and probability
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  ▶ Programming: strong skills
  ▶ Machine learning: at least undergrad level course
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Do I have the appropriate background?

- **Linear algebra, calculus and probability**
- **Statistics**
- **Programming**: strong skills
- **Machine learning**: at least undergrad level course
- **Computer Vision**: at least undergrad level course
Textbooks

- No textbook
- We will be reading papers
- You might need to consult books
- Learning by researching
Requirements

- **Lecture Presentations:**
  - Everyone will be responsible to present 1 time in class
  - Worth 10% of the total mark

- **Quizes:**
  - Given a set of practical problems, you need to be able to design (not code) a method to solve them
  - Worth 25% of course mark

- **Challenges:**
  - You will need to participate in 2/3 challenges
  - Worth 40% of course mark

- **Project:**
  - Choose one of this challenges (or something else) as your final project and do a bit more work on it
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Let’s get to know you!
Get to Know you

Link

1. Name and email
2. Background: department where you are at, which year, masters/phd/applied masters, etc
3. Research topic/ interest for grad studies
4. Supervisor
5. Experience in machine learning, computer vision and/or sports analytics
6. Why are you taking this course?
7. Particular topics you will like to have covered in class

If you haven’t submitted your pdf slides, do so asap
Let’s get back to the course
Goals of this course

1. You will discover that sport analytics is a really cool research topic
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2. Everyone should do an awesome project that will be accepted to a top-tier conference
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1. You will discover that sport analytics is a really cool research topic
2. Everyone should do an awesome project that will be accepted to a top-tier conference
3. After taking this class you’ll get a job at the Raptors, FC Toronto, Blue Jays, Argonauts teams
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Quizzes are individual

Can I do a project for 2 courses at the same time?

▶ Only if you show what is for each class and the project is much bigger

▶ Require approval by the other instructor as well
Quizzes, Challenges and Projects

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- **Challenges** and project can be in pairs (recommended)

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Intense but fun course
Learn by doing (i.e., example)
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Presentations in Class

- I’ll post on piazza a link to vote for topics to present
  - Don’t forget to vote or you will be randomly assigned
Challenge 1

- Object Detection and Tracking in Videos (w/wo action recognition)
Predicting "bracketology" 2017 (March 12)
Challenge 3

- NBA Play Discovery from 3D data