



**Trinity College Dublin**  
Coláiste na Tríonóide, Baile Átha Cliath  
The University of Dublin

Lecture slides are available on *Blackboard*

# CS3BC2 2018 -- Lecture 01, Part 1

E-Business II: Course Introduction

**Dr Joeran Beel**

School of Computer Science and Statistics  
ADAPT Centre, Knowledge & Data Engineering Group

2018-01-16

# Outline Today

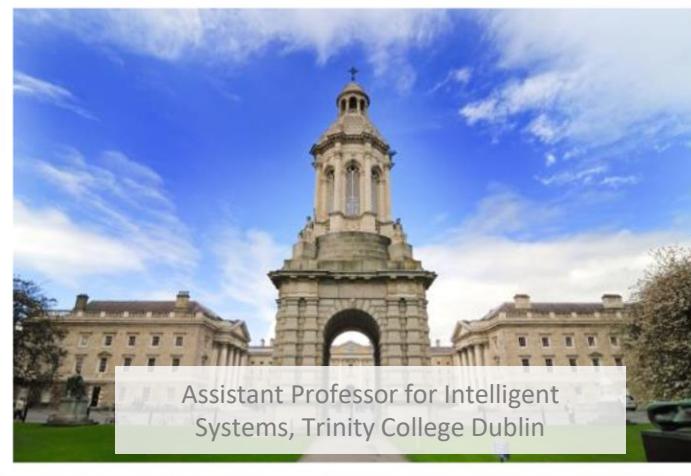
- 1. Introduction to the Lecturer**
- 2. Overview of the Module**
- 3. Survey of the Students**
- 4. Group Projects**
- 5. Feedback from last year**
- 6. Introduction to e-Commerce (next slide deck)**



**Trinity College Dublin**  
Coláiste na Tríonóide, Baile Átha Cliath  
The University of Dublin

# Introduction (Joeran Beel)

# Joeran Beel



# Start-Up 1: GSM Guardian Angel

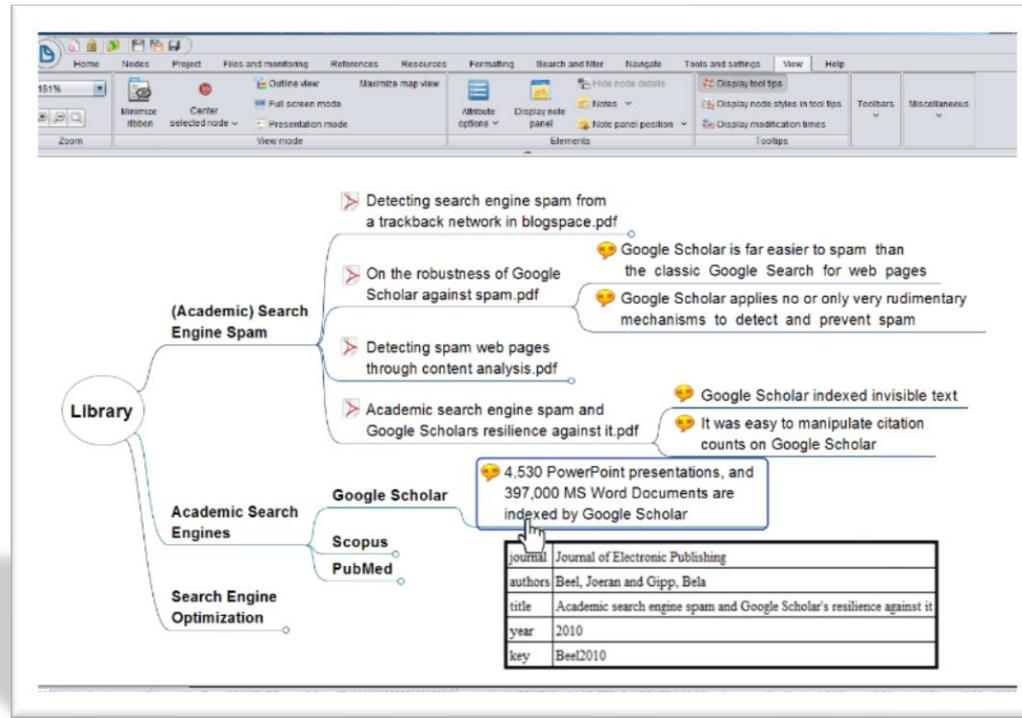
<http://www.gsm-schutzen.de>



<https://f2.blick.ch/img/incoming/origs6199636/5792539239-w1280-h960/17-02-10-VU-St.jpg>

# Start-Up 2: Docear

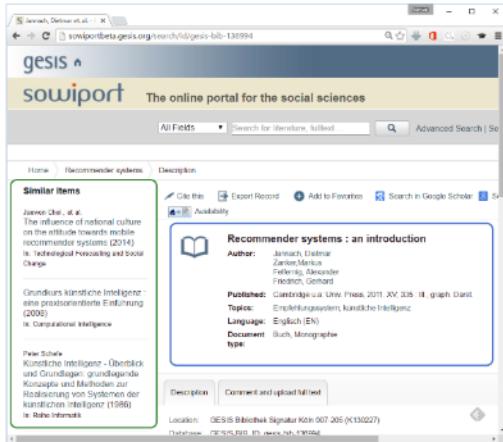
<http://www.docear.org>



[www.docear.org](http://www.docear.org)

# Start-Up 3: Mr. DLib

<http://mr-dlib.org>



(3) The partner displays the related articles on its website

(1) A partner requests related articles



```
<?xml version="1.0"?>
<?xml-stylesheet type="text/xsl" href="http://www.dlib.org/dlib/related_articles.xsl"?>
<related_articles suggested_label="Related articles">
  <related_article document_id="3900218" original_document_id="ces:sa:201507387">
    <click_url>
      http://souwiport.gesis.org/search/id/ces:sa:201507387
    </click_url>
    <fallback_url>
      http://souwiport.gesis.org/search/id/cia:sa:201507287
    </fallback_url>
    <target_format>xml</target_format>
    <Abstract>The influence of national culture on the attitude towards mobile recommender systems</Abstract>
    <Author>Janneke Oei, Hong-Joo Lee, Farhana Sayyad, Rehmat Ali</Author>
    <Journal>Technological Forecasting and Social Change</Journal>
    <Volume>141</Volume>
    <Issue>1</Issue>
    <Year>2015</Year>
    <Pages>441-451</Pages>
  </related_article>
  <suggested_rank_id="suggested_ranks">
    <related_article document_id="50000127" original_document_id="gesis-bib-1161377">...</related_article>
    <related_article document_id="6865319" original_document_id="gesis-bib-5772" ...</related_article>
    <related_article document_id="6865320" original_document_id="gesis-bib-5773" ...</related_article>
    <related_article document_id="6832935" original_document_id="ukp-001770873" ...</related_article>
    <related_article document_id="6421408" original_document_id="ukp-00267531" ...</related_article>
    <related_article document_id="6421409" original_document_id="ukp-00267532" ...</related_article>
    <related_article document_id="640751" original_document_id="ukp-0035950" ...</related_article>
    <related_article document_id="6857462" original_document_id="ukp-000001421" ...</related_article>
    <related_article document_id="6853084" original_document_id="ukp-000050358" ...</related_article>
  </suggested_rank_id>
</related_articles>
```

(2) Mr. DLib returns a list of related articles

# Affiliated Projects

The image displays three screenshots of software applications used in research:

- OriginStamp (www.originstamp.org):** A web-based service for trusted timestamping. The screenshot shows a file upload interface where a user can drop a file to create a timestamp. It includes fields for title (optional) and a "Create Timestamp" button.
- JABREF (www.jabref.org):** A BibTeX manager application. The screenshot shows a list of references in a LaTeX document editor. One reference is highlighted, showing details like author, title, and journal. The interface includes a toolbar at the top and a preview pane below the list.
- CitePlag (www.citeplag.org):** A plagiarism detection tool. The screenshot shows a search results page for a specific document. It displays the document's content, a similarity plot comparing it to other texts, and a detailed analysis of detected plagiarism.

# Project Opportunities

- **PhD positions**
- **Paid Research internship at NII, Tokyo,**
  - 6 months, starting around July or August 2018  
<http://www.nii.ac.jp/en/about/international/mouresearch/internship2017-2/> (old)
- call)
- Only for Master and PhD students
- **Unpaid Internship at Mr. DLib (Business Start-Up)**
- **This course (Group Work)**



<http://nandanbuildcon.com/wp-content/uploads/2016/09/outgoing-projects.jpg>

# Life in Tokyo and Japan



# Life in Tokyo and Japan



# Life in Tokyo and Japan



# Life in Tokyo and Japan

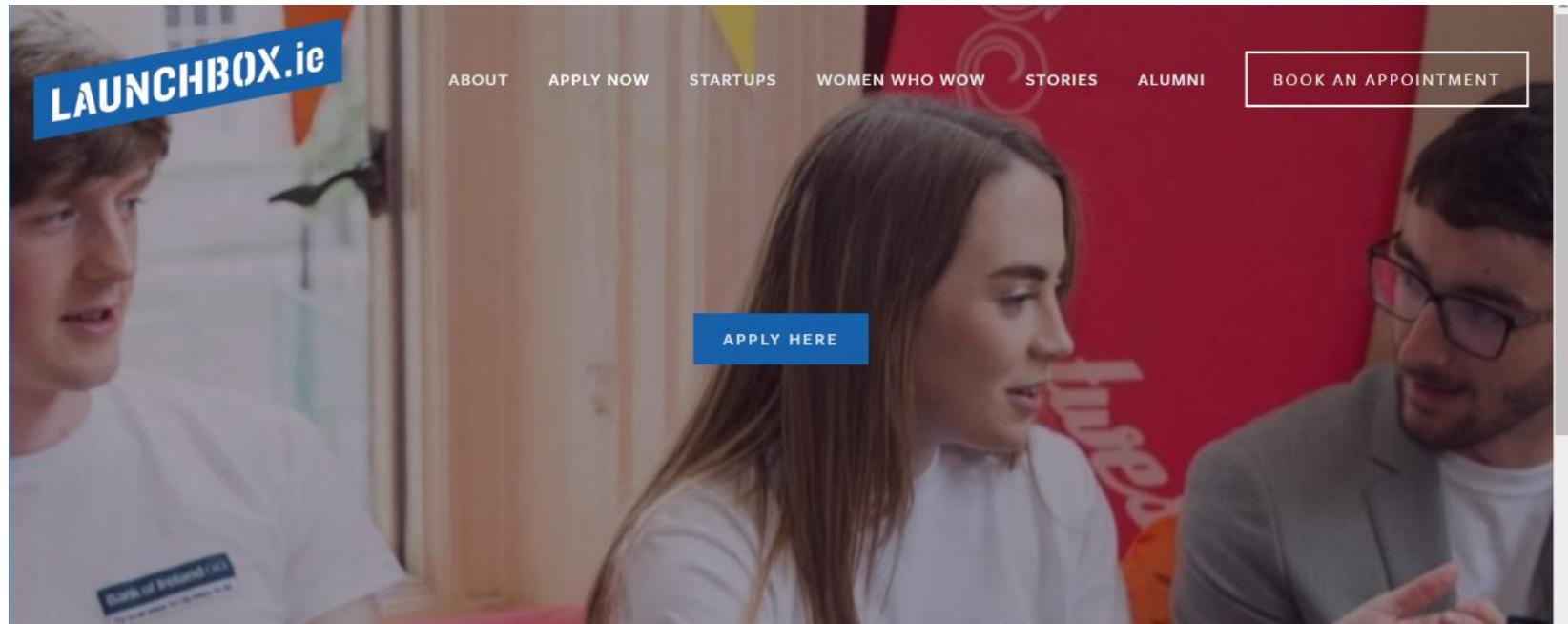


# Life in Tokyo and Japan



# Launchbox

<http://www.launchbox.ie>

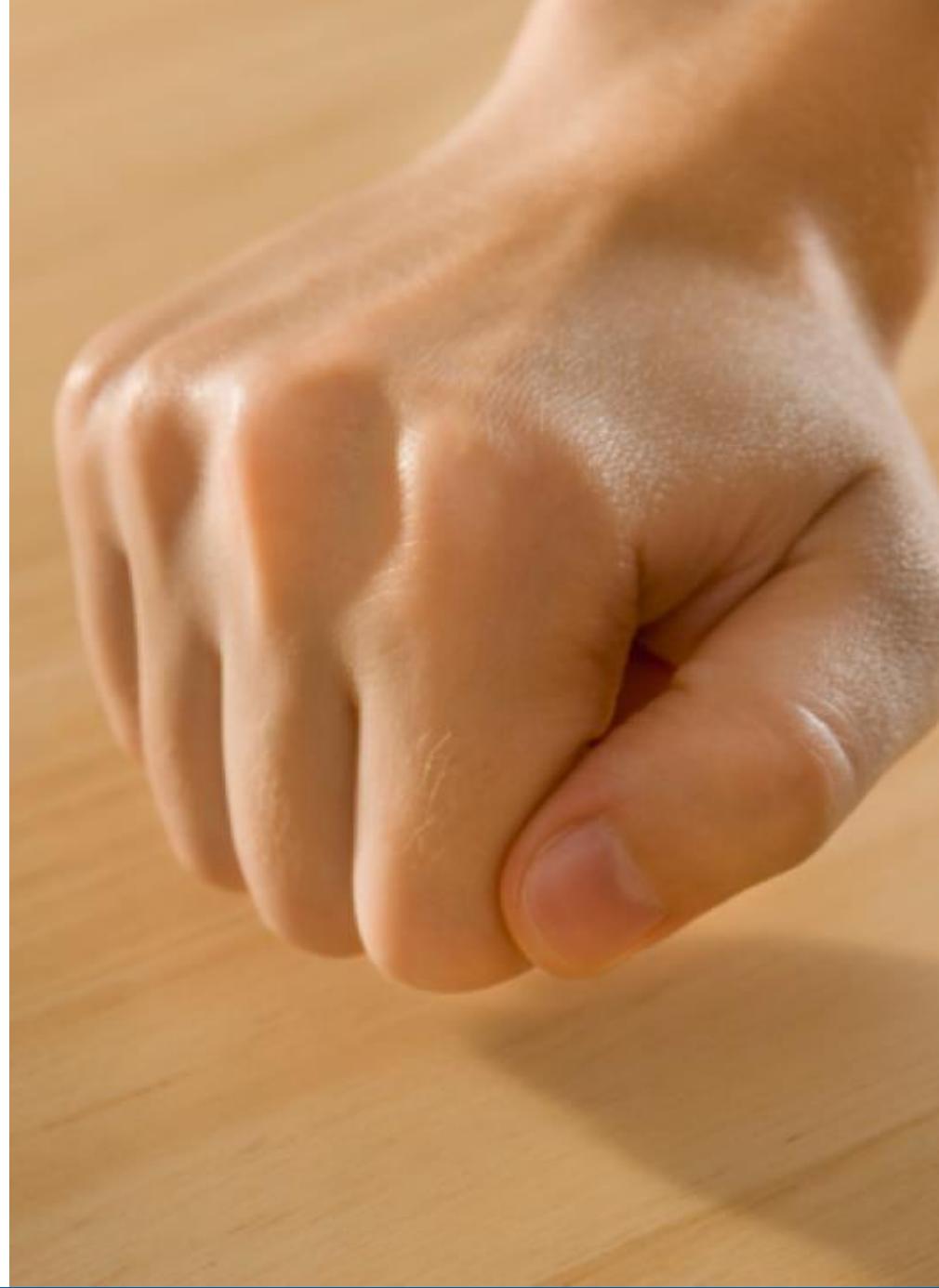


Applications are now OPEN for LaunchBox 2018! Deadline: 11 February 2018

[WHY SHOULD YOU APPLY?](#)

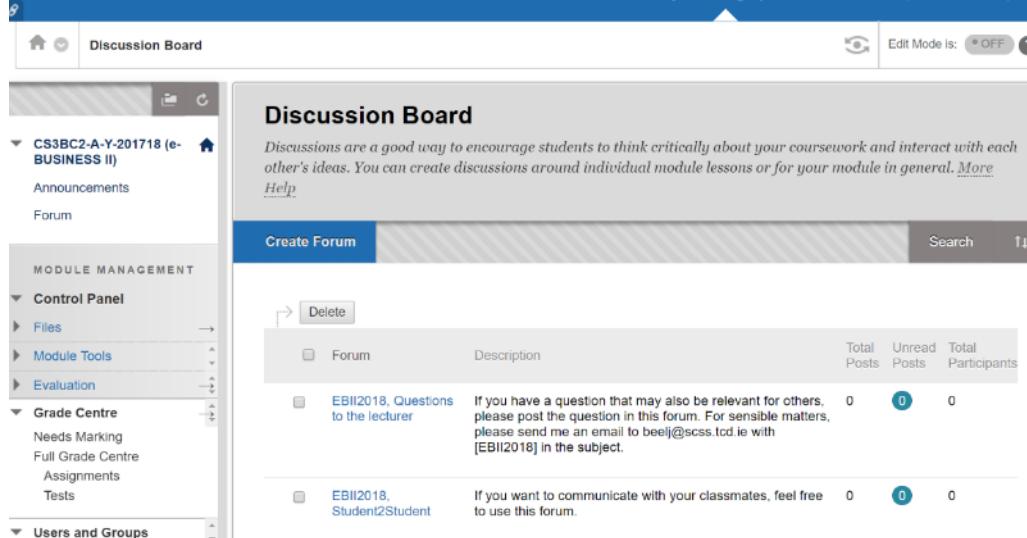
# My Expectations

- **I begin and conclude the lecture; you acknowledge via knocking on the desks (German style ☺ )**
- **If you attend lectures:**
  - Be on time, sharp!
  - Only lecture-related use of electronic devices
  - No noisy typing
  - No talking
  - No phone ringing (switch to silent/airplane mode)
  - Unpack your stuff before the lecture begins, and pack your stuff after the lecture concludes
  - Let me know in advance if you will come late or leave early



# Contact

- **Whenever something could be relevant for others**
  - Blackboard forum
  - Send me email reminder if you don't get an answer within 2 working days
- **For sensitive/private matters**
  - [beelj@scss.tcd.ie](mailto:beelj@scss.tcd.ie)
  - Use “[EBII2018]” as prefix (e.g. “[EBII2018] Cannot attend guest lecture”).
  - Meaningful subjects: “[EBII2018] appointment” vs. “[EBII2018] Request for appointment to discuss group-project problems”
  - No large files via email (instead, send Dropbox/gDrive link etc.)
  - New email-threads for new topics: When you want to discuss a new topic, please do not hit the "reply" button in an existing email thread. Instead, create a new email with a new subject. For instance, if you have previously sent an email titled “[EBII2018] Questions about internship at NII in Tokyo”, do not send an email in the same thread to ask when you can hand in the assignment. Instead, create a new email titled e.g. “[EBII2018] assignment hand-in date”.



Forum	Description	Total Posts	Unread Posts	Total Participants
EBII2018, Questions to the lecturer	If you have a question that may also be relevant for others, please post the question in this forum. For sensible matters, please send me an email to beelj@scss.tcd.ie with [EBII2018] in the subject.	0	0	0
EBII2018, Student2Student	If you want to communicate with your classmates, feel free to use this forum.	0	0	0

If you don't follow these rules, you won't get an answer!

# Rules (1)

- Photos are allowed
- No voice and/or video capture of lecture
- No plagiarism (if we catch you, you fail the entire module, or worse)
- I run plagiarism checks with tools like Turnitin; Moss; ...
- Attendance for guest lectures is required
- Deadlines are deadlines: Late buses, computer problems (no internet access, hard drive crash; ...), standard short-duration sicknesses (e.g. a cold) are no reasons for a deadline extension (if the deadline was known long in advance).
- Let me know about (potential) problems as soon as possible. Telling me one day before a deadline that you had a serious illness seven weeks ago, is no excuse (instead, tell me as soon you know that the illness caused you e.g. to stay in bed for two weeks, and you couldn't work during that time).



[https://fonolo.com/wp-content/uploads/2013/11/Stock\\_000013116314Small.jpg](https://fonolo.com/wp-content/uploads/2013/11/Stock_000013116314Small.jpg)

# Rules (2)

- **Late Submissions (1 second or more)**
  - For a marked deliverable (e.g. submission of project report) → 0 marks
  - For an unmarked deliverable (e.g. submission of presentation slides) → Up to 3 marks off course work marks (e.g. 59 instead of 62).
- **Penalties (up to 1 mark off your course work marks) may apply for being late to lectures and ignoring technical specifications such as in which formats to submit files or how to name the subjects of emails; other unprofessional behaviour.**
- **In case of group work, penalties apply to all team members. Advise: Think about how to prevent problems once the teams are build (agree about rules, take meeting minutes, exchange contact details, have a backup plan for sickness, accidents, or low motivation of team members, ...). Most importantly: have written evidence of all important decisions!**
- **Underperformance in group work: If team members feel that one team member strongly underperforms, the following steps are to be taken, as soon as possible**
  - The team tries to find a solution with the particular team member in a personal discussion as soon as possible.
  - If the particular team member continues to underperform, the team contacts the lecturer, and provides written evidence (meeting minutes, emails, ...) of the ongoing underperformance and the team's attempts to find a solution.
  - The lecturer will schedule a meeting with all team members. Depending on the evidence, the lecturer may decide to reduce the course work marks of the particular's team member by up to 50% (e.g. 30 marks instead of the group's 60).
  - If the particular team member continues to underperform, the team contacts the lecturer again, and provides written evidence of the ongoing underperformance.
  - In another meeting, the lecturer may decide to deduct further marks from the particular team member, and, if necessary, to remove the team member from the team (resulting in 0 marks for the course work for that team member)
  - **Report problems as soon as possible**



**Trinity College Dublin**  
Coláiste na Tríonóide, Baile Átha Cliath  
The University of Dublin

# Overview of the Module

# Potential Topics

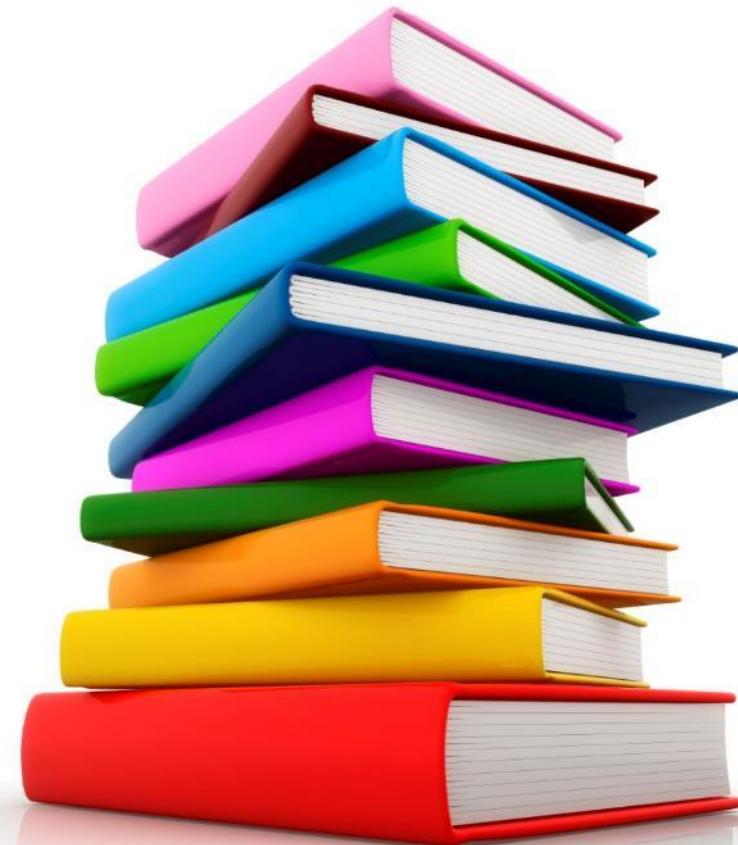
1. Introduction to Electronic Commerce
2. The Infrastructure of the Internet
3. Internet Applications (WWW, Email, ...) & IP Addresses
4. Domains & Protocols (HTTP)
5. Markup Languages and Data Formats (HTML, CSS, XML, JSON) (1)
6. Markup Languages and Data Formats (HTML, CSS, XML, JSON) (2)
7. Web Services (REST & SOAP)
8. Net Neutrality
9. Guest Lecture
10. Programming for the Web (JavaScript; HTML 5; PHP; JSP)
11. Cryptocurrencies
12. Personalization and User Tracking
13. Writing Business Plans
14. Payment Methods & Protocols (PCI-Compliance; SET; ...)



<http://www.asianentrepreneur.org/wp-content/uploads/2015/10/ecommerce.jpg>

# Literature

- ~~Electronic Commerce, by Gary Schneider, 12th Edition~~
  - ~~https://www.cengagebrain.co.uk/shop/en/GB/storefront/emea?cmd=CLHeaderSearch&fieldValue=9781305867819~~
  - ~~106£~~
- ~~D. Chaffey. E-Business and E-Commerce Management, Strategy, Implementation and Practice~~
- **Wikipedia, Google and the World Wide Web**



<https://thecliparts.com/wp-content/uploads/2016/05/pile-of-books-clip-art.jpeg>

# Re-Scheduled Lectures and Labs

- **Lecture in week 11 (27. March) will be rescheduled to → ???**
- **No Labs**
  - 22. March
  - 29. March



<https://cdn.iphonelife.com/sites/iphonelife.com/files/Reschedule-Appointments-by-Dragging-and-Dropping-Calendar-Events.jpg>

# Course & Marking

- **Lectures**
  - 11 lectures, 2 hours each
  - Mostly classic lecture style
  - Maybe some case studies
  - Sometimes for group work / presentations
- **Exam, 2 hours (50%)**
- **Group Work (50%)**
- **Lab Sessions**
  - 11 lab sessions, 1 hour each
  - Mostly for group projects
- In LB04 **LB120**, unless stated otherwise
- **Supplemental Exam, 2 hours**

# Exams

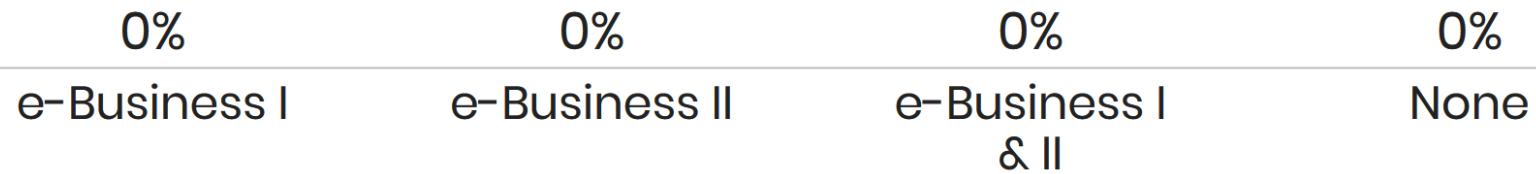
- **Multiple choice**
- **Short answer questions**
- **Understanding source code**
  - Explaining the functionality
  - Finding errors



**Trinity College Dublin**  
Coláiste na Tríonóide, Baile Átha Cliath  
The University of Dublin

# Introduction (You)

## Who attended "e-Business I" and "e-Business II" already?



Slide is not active

Activate



# What career paths are attractive to you?

0%

Business  
Start-up  
Founder

0%

Software  
Engineer

0%

Project or  
Product  
Manager

0%

Business  
Manager

0%

Consultant

0%

Researcher

0%

Other

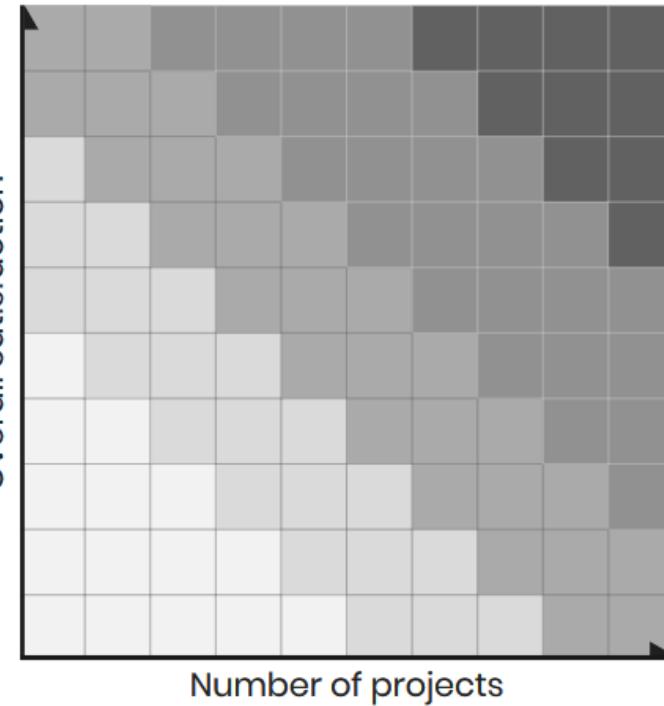


Slide is not active

Activate



# How is your group work experience?



1

Group Projects as part of a module at the university

2

Group Projects outside the university (personal projects; internships; summer jobs; ...)

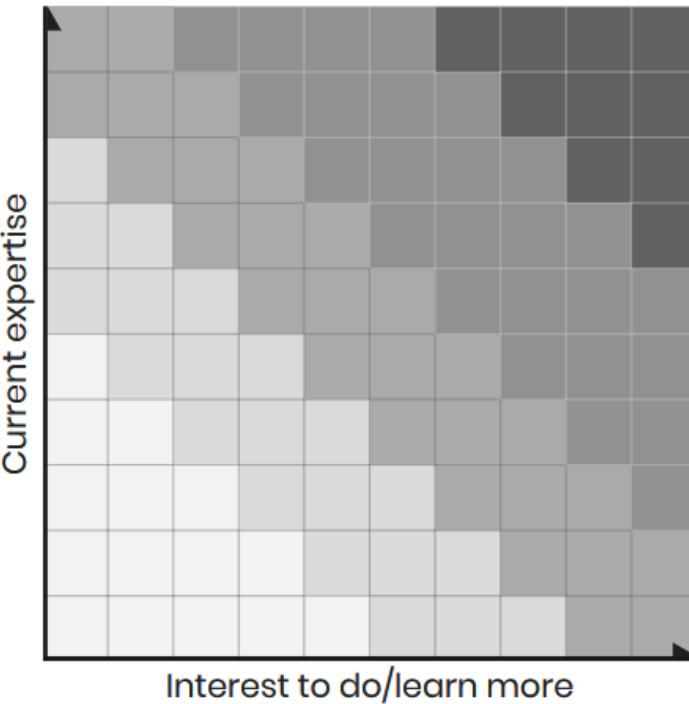


Slide is not active

Activate



# Your knowledge and interests



- 1 Application Development (JAVA; C++/#; PHP)
- 2 Simple Web Development (HTML 4 & CSS)
- 3 Adv. Web Develop. (HTML 5; JavaScript)
- 4 Mobile Development (Android or iOS)
- 5 Databases (MySQL; PostgreSQL; Mongo; ...)
- 6 Data Formats (XML; JSON)
- 7 Web Protocols (TCP/IP; HTTP; FTP; SSL; ...)
- 8 Web Services (REST; SOAP)
- 9 Project Management Tools (Slack; Basecamp; JIRA;...)
- 10 Payment Methods & Protocols (PCI-Compliance; SET; ...)
- 11 Cryptocurrencies (Bitcoin; Ethereum; ...)
- 12 Personalization; Advertisement; User Tracking
- 13 Net Neutrality
- 14 Writing Business Plans
- 15 Giving Presentations (e.g. about your group work)

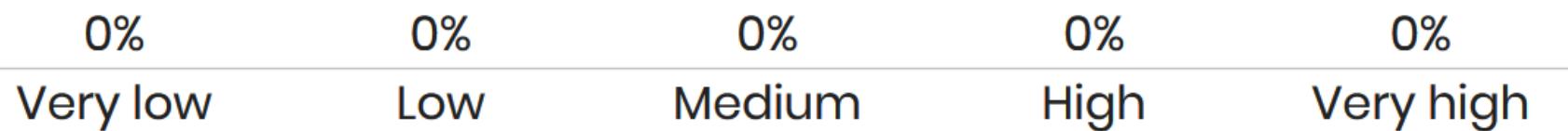


Slide is not active

Activate



## How is your overall motivation to participate in this module?

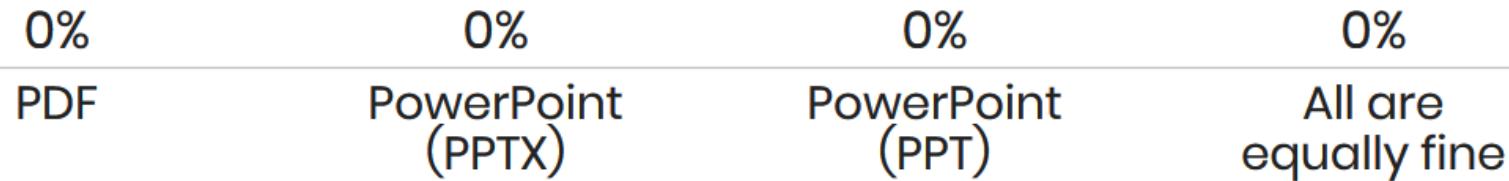


Slide is not active

Activate



# Preferred File Format of Lecture Slides



Slide is not active

Activate



Go to [www.menti.com](http://www.menti.com) and use the code 29 48 11



Mentimeter

# What are the three most important things you expect from the lecturer?



Slide is not active

Activate



0



**Trinity College Dublin**  
Coláiste na Tríonóide, Baile Átha Cliath  
The University of Dublin

# Group Projects

# Group Projects

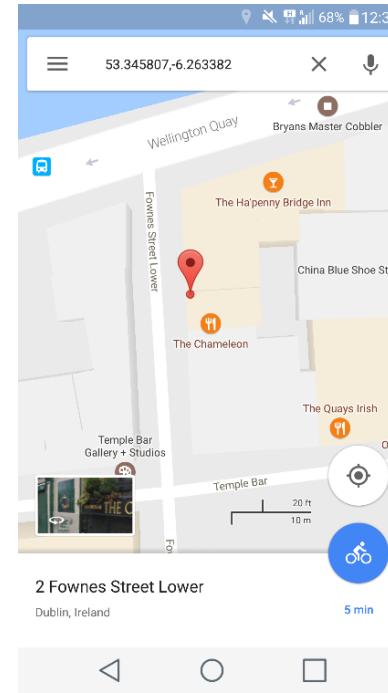
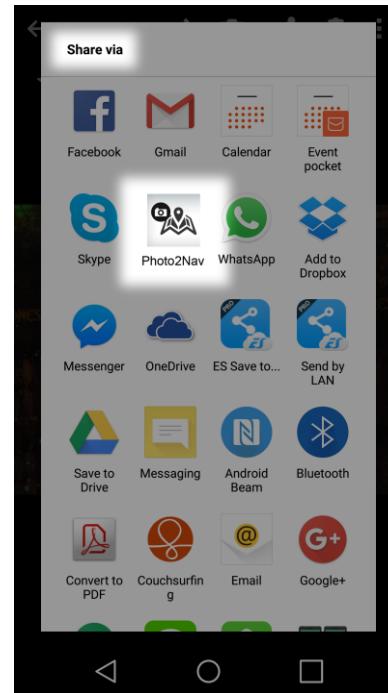
- **Worth 50% of your final marks**
- **Several projects to choose from**
- **Main Deliverables:**
  - A simple but fully functional web, mobile, or desktop application. Ideally, a novel idea but also a copycat is ok.
  - An evaluation (e.g. user study) that shows that your application is better (or worse)
- **than the competition, or you test different versions of your product.**
- **Group size: 5 students (less, if there is a good reason)**
- **Every team member gets the same marks for the group project**
- **Different teams can do the same project**



<https://cdn.govexec.com/media/img/upload/2013/09/27/100113mmattMAG.jpg>

# Project Example 1: Photo2Navigation

An android app that opens a photo, extracts the GPS coordinates where the photo was taken, and then shows the location on a map (and starts navigation to that point). The usage scenario is that a user took a photo of a nice location (e.g. a restaurant), and some weeks later the user wants to find that restaurant but does not remember where it was. However, the user has the photo and with Photo2Navigation he or she can easily find the restaurant again.



Icons from <http://www.freeiconspng.com/free-images/camera-icon-55> and <https://d13yacurqjgara.cloudfront.net/users/147945/screenshots/865268/map-icon.gif>

## Project Example 2: The Cryptocurrency Donation Calculator

A service that allows users to "donate" their computing power while they visit a website. This computing power is then used to mine cryptocurrencies (e.g. bitcoins) for the website owner. This concept could open a complete new revenue stream for website operators, in addition to classic advertisement and subscription models.

The screenshot shows the homepage of The New York Times. At the top, there are navigation links for 'SECTIONS', 'SEARCH', 'ENGLISH', 'CHINESE', 'ESPAÑOL', 'CryptDonate', 'SUBSCRIBE NOW', 'LOG IN', and a gear icon. A green sidebar on the left says 'Subscribe to debate, not division.' and another on the right says 'Get The Times for just €1.75 a week.' The main headline is 'The New York Times'. Below it, the date is Sunday, January 14, 2018, and the weather is 43°F. The menu bar includes 'World', 'U.S.', 'Politics', 'N.Y.', 'Business', 'Opinion', 'Tech', 'Science', 'Health', 'Sports', 'Arts', 'Style', 'Food', 'Travel', 'Magazine', 'T Magazine', 'Real Estate', and 'ALL'. A large green box at the bottom features the heading 'Donate Your Computing Power' with a subtext about supporting the paper through mining bitcoins. It includes a 'Activate Now' button and a red arrow pointing from the 'Activate Now' button towards the 'Sunday Review' section at the bottom. The 'The New York Times' logo is also present in the bottom right of the green box. The footer includes 'Alert About' and 'Sunday Review' sections with small images.

# All Projects

- <https://www.dropbox.com/sh/ym0ak6uxwqe88hz/AADz36jK7P-jJML57yAxPSOCa?dl=0>

# Pitch Your Own Project / Project Selection



- **Every student may propose 1 project**
- **The class votes on all projects**
- **I choose the final list of top-projects that may be done**
- **Students choose their preferred projects**
- **Benefits for proposers of top projects**
  - They become project lead
  - Up to 5 percentage points added to final course work grade (e.g. 65% instead of 60%)
  - 3 team members of their choice (in consent with team members)

# Project Pitch Details

- **Prepare 1 slide with a complete textual description of your project**
  - Problem
  - Proposed Solution
- **Prepare two presentations with up to a) 2 slides b) 5 slides for the pitch**
- **Presentations will be 1, 2 or 5 minutes, depending on the total number of project pitches**
- **Content of presentations**
  - Full project title
  - Short title (max. 16 characters, no spaces or special characters)
  - Your name, student ID, and email
  - Information about the project
- **Proposed Structure**
  - Background
- **Submission**
  - Each presentation (1 slide; 2 slides; 5 slides) as separate file (Powerpoint preferred; alternatively PDF)
  - No additional files (e.g. video)
  - Email to [beelj@scss.tcd.ie](mailto:beelj@scss.tcd.ie)
  - Subject: [EBII2018] project pitch: \$short\_title
  - File name: project\_pitch--\$your\_last\_name--\$student\_id--\$short\_title--[1|2|5].[pdf|pptx] (all lower case)
  - Do not attach files to the email, but send me a link for a direct download (e.g. Dropbox or Google Drive)

# Awards

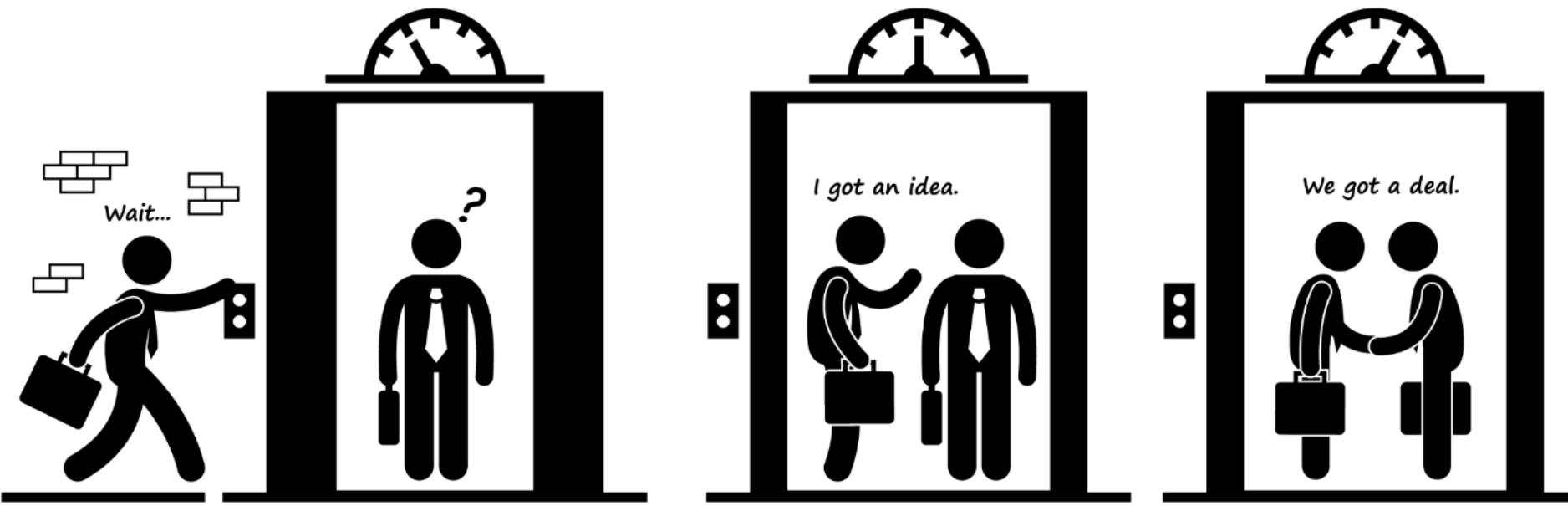
- **The best performing team(s) may give the following awards to their team members**
  - Best-performing team-member award: 5 bonus percentage points on course work marks (e.g. 68 instead of 63)
  - Most-supportive team member award: 3 bonus percentage points on course work marks
- **The best-performing team(s) are selected by the lecturer**
- **Awards are voted for during lab session on 5 April, 2018, or later via online survey.**



<https://i.pinimg.com/originals/d0/19/0c/d0190c99e34936020379da24a94bc769.jpg>

# Deliverables: Elevator Pitch (5%)

- **Presentation (5%)**
  - Slide Content (4%)
    - (Background)
    - Problem
    - Proposed Solution
    - Project Plan / Roadmap / Gantt Chart
  - Slide Layout (0.5%)
  - Presentation Style (0.5%)
- **2 Minutes Presentation + 3 Minutes Questions**



# Deliverables: Interim Status Update (15%)

- **Presentation (4%)**
- **Report (11%)**

**More details soon**

# Deliverables: Final Project (30%)

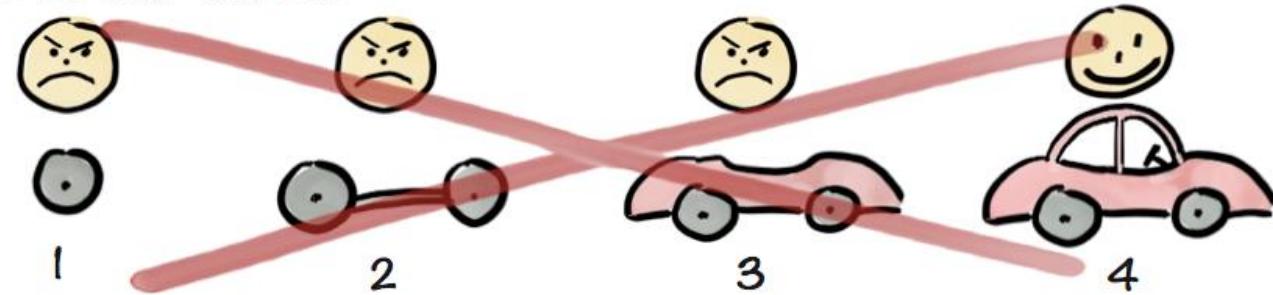
- **Presentation (7.5%)**
- **Report (12.5%)**
- **Website/App (10%)**
- **Source Code & Data ('0%)**

**More details soon**

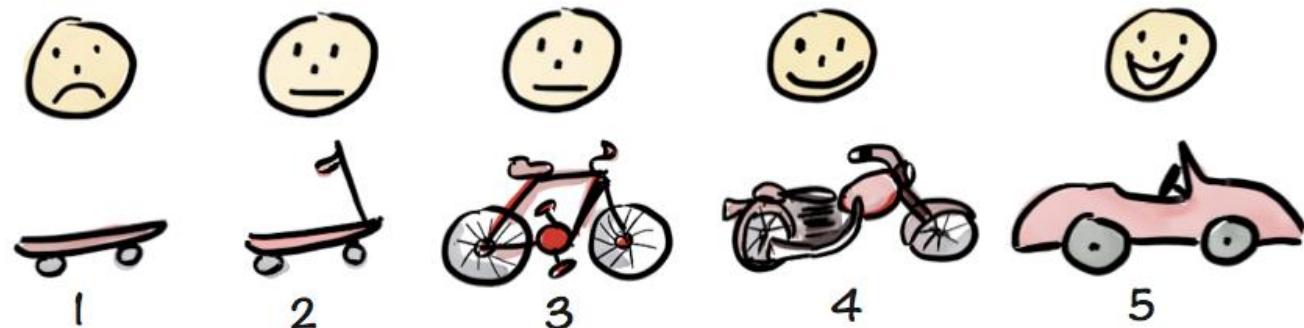
# Minimal Viable Product (MVP) Approach

<https://www.google.ie/search?q=minimal+viable+product+approach>

Not like this....



Like this!



by Henrik Kniberg

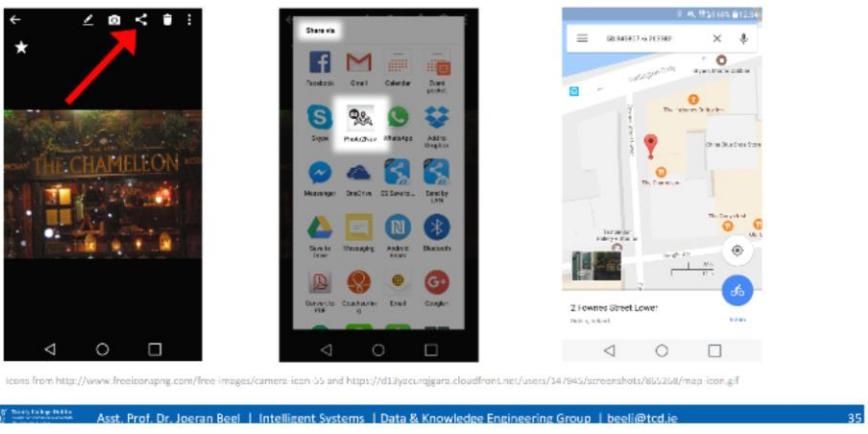
<https://public-media.interaction-design.org/images/uploads/9f7f5b30ed9905117b65572ab6949a9f.png>

# MVP Example

Focus on what really matters

## Project Example 1: Photo2Navigation

An android app that opens a photo, extracts the GPS coordinates where the photo was taken, and then shows the location on a map (and starts navigation to that point). The usage scenario is that a user took a photo of a nice location (e.g. a restaurant), and some weeks later the user wants to find that restaurant but does not remember where it was. However, the user has the photo and with Photo2Navigation he or she can easily find the restaurant again.



## Project Example 2: The Cryptocurrency Donation Calculator

A service that allows users to "donate" their computing power while they visit a website. This computing power is then used to mine cryptocurrencies (e.g. bitcoins) for the website owner. This concept could open a complete new revenue stream for website operators, in addition to classic advertisement and subscription models.



# Milestones & Schedule (1)

Responsible	Deliverable	Due Date
Prospective Project Leads	Project Pitch, Slides	18.01.2018, 8:00
Prospective Project Leads & Students	Project Pitch, Presentation	18.01.2018, 11:00-12:00
Lecturer	Announcement of suitable projects	19.01.2018, 20:00
All Students & Lecturer	Clarify Questions	25.01.2018, 11:00-12:00
All Students	Project/Team Preference	26.01.2018, 8:00
Lecturer	Announcement of Teams	29.01.2018, 20:00
Students	Elevator Pitch, Slides	08.02.2018, 8:00
Students	Elevator Pitch, Presentation	08.02.2018, 11:00-12:00
Lecturer	Feedback/Marks for Elevator Pitch	Mid/End February 2018

# Milestones & Schedule (2)

Responsible	Deliverable	Due Date
Students	Interim Report	05.03.2018, 8:00
Students	Interim Presentation Slides	08.03.2018, 8:00
Students	Interim Presentation	08.03.2018, 11:00-12:00
Lecturer	Feedback/Marks for Interim Presentation/Report	Mid/Late March, 2018
Students	Final Project Presentation Slides	03.04.2018, 8:00
Students	Final Project Presentation	03.04.2018, 10:00-12:00
Students	Final Project Report & App/Website	08.04.2018, 20:00
Lecturer	Feedback/Marks for Final Presentation/Report	Late April, 2018

# Misc

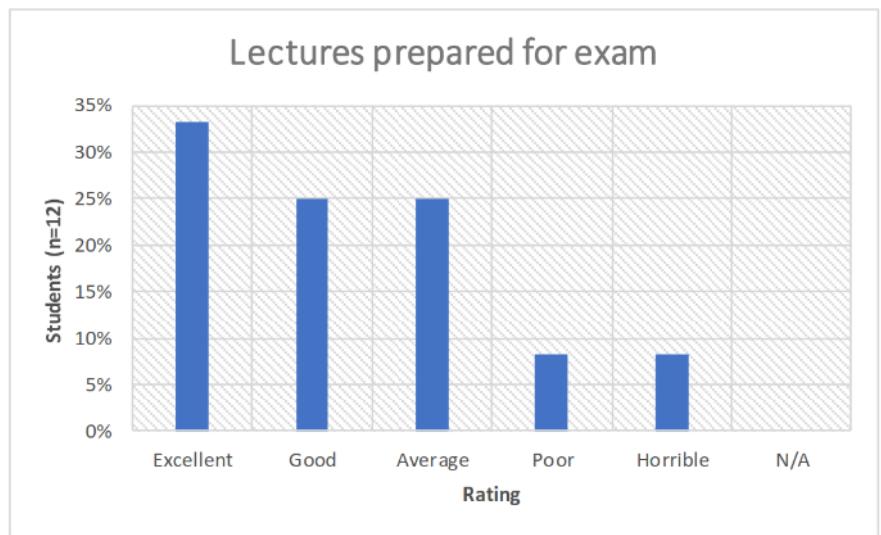
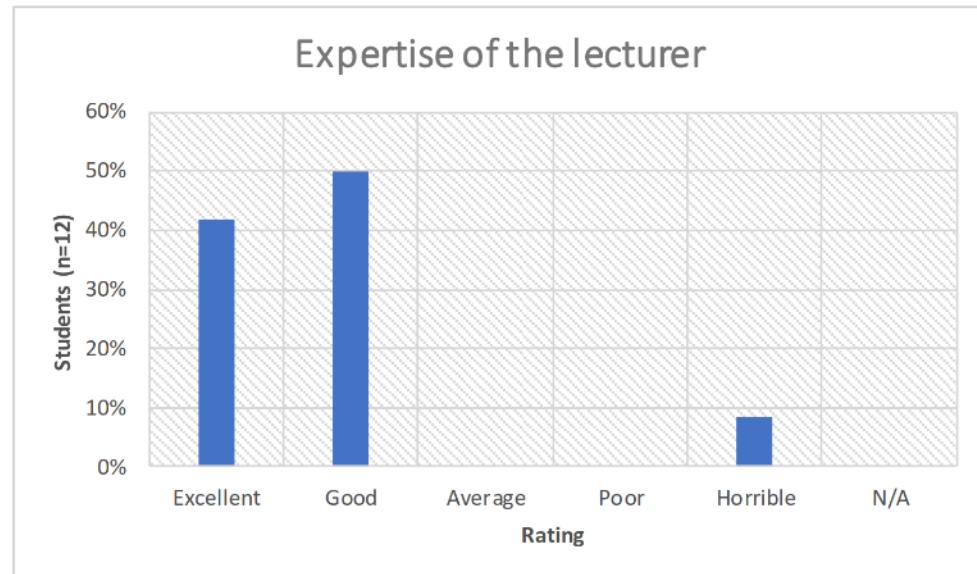
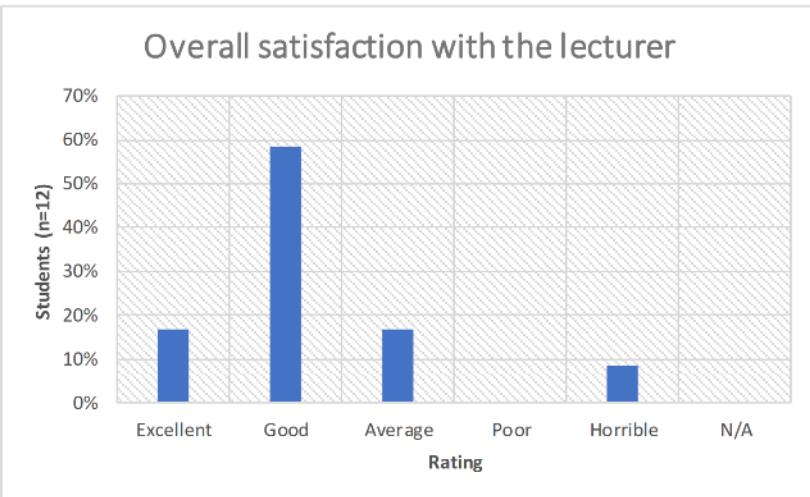
- **Each team must choose a project lead**
- **The project lead is the primary point of contact for the lecturer.**  
**Submissions of reports etc. are to be sent by the project lead.**
- **The project lead is not necessarily the ‘boss’ who decides what to do, but rather the overall manager and organizer.**
- **Presentations are to be submitted in PDF or PowerPoint ppt/pptx format (ideally both PDF *and* PowerPoint)**



**Trinity College Dublin**  
Coláiste na Tríonóide, Baile Átha Cliath  
The University of Dublin

# Feedback from Last Year

# Lecturer & Lecture

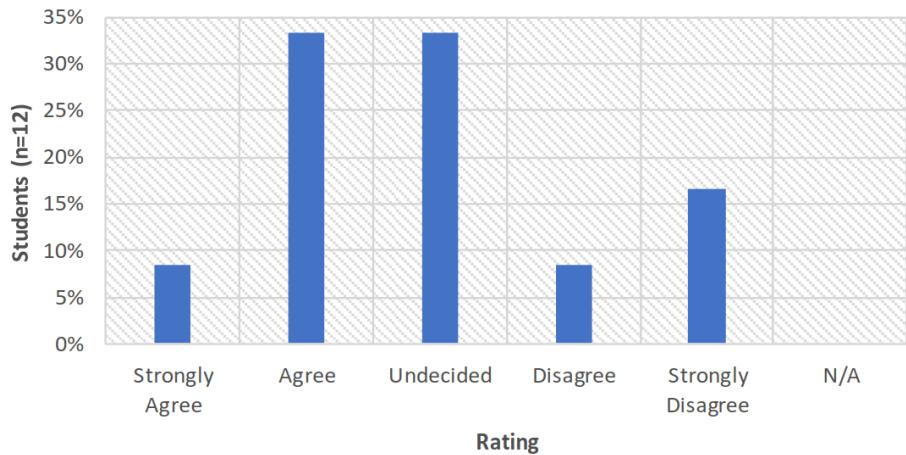


# Group Project

I learned more than in other modules' lab sessions or group projects



The time I had to spend was appropriate

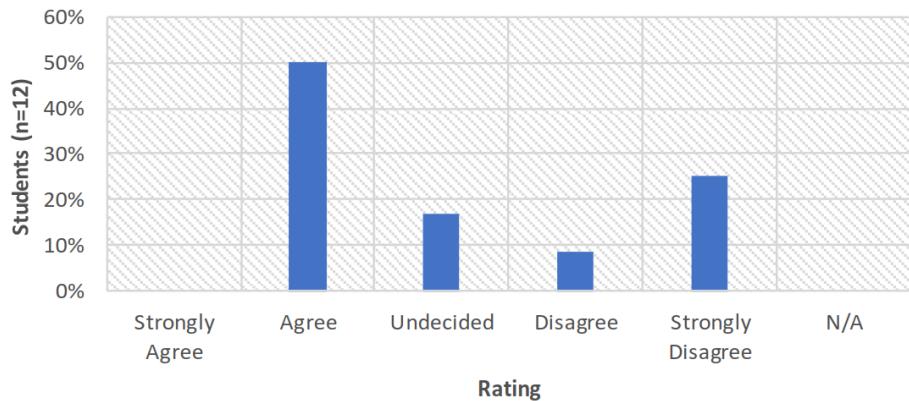


I gained valuable knowledge/skills through the project



# Time and Penalties

The amount of work I had to spend for this module, was just about right for 5 ECTS



The penalties the lecturer gave for late submissions etc. were appropriate



# Lecture Evaluation

0

The SPEED of the  
lecture was  
JUST RIGHT

0

The SPEED of the  
lecture was  
TOO SLOW

0

The SPEED of the  
lecture was  
TOO FAST

0

The RELEVANCE  
of the topics  
was HIGH

0

The RELEVANCE  
of the topics  
was NOT SO  
HIGH

0

The DEPTH of  
the topics was  
JUST RIGHT

0

The DEPTH of  
the topics was  
TOO COMPLEX

0

The DEPTH of  
the topics was  
TOO SHALLOW



Slide is not active

Activate



0

# Questions?



<https://kaiserhealthnews.files.wordpress.com/2017/02/khnoncall-2-2.jpg?w=1024>



**Trinity College Dublin**  
Coláiste na Tríonóide, Baile Átha Cliath  
The University of Dublin

**Thank You**