Coursework 3: Group project

Module:	Foundations of Data Science		Lecturers:	ES, MB, HF
Assignment:	Group project		Weight:	70%
Deadline:	12/01/2018	Feedback: 02/02/2018	Version	1.0

Description

In this coursework, you will form groups of five students, and develop a data science application, demonstrating all aspects of the data science pipeline covered in the module. This application may be on any topic in any domain of your choosing, but should include more than one dataset, and use data science techniques to provide insight towards a real world problem. You will be expected to follow good software engineering practices, evaluate the effectiveness or reliability of your model or analysis, and justify design and methodological choices.

Milestones and deliverables

There are four milestones for this project. We will assess MS3 and MS4. However, MS1 and MS2 must be completed in order for your team to be allowed to proceed to MS3 and MS4.

Milestone 1: Team and project brief

By this milestone, the team must be formed, including a designated team leader and their deputy. The direction of the project should be clear and a project plan should have been outlined.

Deliverable (compulsory)

Teams must submit a short project brief (1 A4 side, PDF) to ECS Handin by Friday 27th of October 2017. The document must include:
- The project title
- The project description
- Names and email addresses of all the team members
- Designated team leader and deputy
- The address of a public git repository where the code for the application will be made available

Feedback

You will receive informal feedback (verbal or in writing) on the brief from the lecturer who supervises your project.

Milestone 2: Project pitch

In Week 5 the groups will provide a pitch of the project to the class, which will be followed by short discussion session.

Deliverable (optional)

One slide per team is allowed, but it is not compulsory. If you decide to use the slide, please note we will only take one slide, no cover page, final thank-you slide etc. All information must be on a single slide. You should send that slide to Huw Fryer via email at h.fryer@soton.ac.uk by 12:00 (midday) on Wednesday 1st of November 2017. We will put all slides together to make sure we avoid switching computers too often.

Feedback

You will receive some verbal feedback from the audience. You can also discuss the pitch with the lecturer supervising your group project.

Milestone 3: Group presentation

Teams will present their work during the module sessions on the 11th and 12th January 2018. To ensure fairness, all teams must be prepared to present first, and the presentation order will be picked randomly during the sessions.

Deliverable (compulsory)

Teams should submit their slides on ECS Handin by 12:00 (midday) on Wednesday 10th of January 2018 prior to the presentation. The slides may be in Powerpoint (pptx) format, or a PDF file.

Feedback

You will receive questions from the audience, including the lecturers. There will also be general feedback on the presentations and a discussion of highlights and lowlights of the presentations with all groups.

You will also receive written feedback for the presentation and the paper (see next). The feedback will apply to the entire group.

Milestone 4: Conference paper and marks distribution form

Teams should submit a final report on the work undertaken, in the style of a conference paper, and a document signed by all team members agreeing on the division of marks for the project.

Deliverable (compulsory)

Teams should submit a PDF file using the standard 2017 ACM conference proceedings style (using the sigconf style option for the template) by Friday 12 January 2018. The paper should be at most 6 pages in length, including all references and appendices (if used). Note

that we cannot offer assistance with formatting technicalities. Make sure you start writing early to avoid last-minute problems.

The mark distribution form should be a PDF file signed by all team members.

The team should elect one person to do the submission, which should include two PDFs: the conference paper, and a mark distribution form, signed by all members of the team.

Feedback

Written group feedback will be given covering the points listed in the marking scheme, and will be emailed out once marking is complete. The feedback will cover the group presentation and the paper.

Marking scheme

The conference paper and presentation will be marked as a single piece of work using the following criteria.

Criterion	Description	Marks
Choices and justifications	Teams should choose a suitable challenge, and justify the reasoning behind the choice, and the technologies and techniques used to solve it	15%
Analysis of results	The overall effectiveness, as well as strength and weaknesses of your application should be discussed	30%
Technical implementation	The application should be complete, should run without errors, and behave as defined	35%
Reporting	The report should be clear and professional in tone. High quality references should be used to justify statements	20%

Standard ECS late submission penalties apply.

Marks split

Team members should agree between themselves as to how the marks awarded for the team submission will be divided between the team members (see below for instructions on how to proceed if this is not possible). The team leader should print out the form here, complete it as agreed and arrange for every member of the team to sign and date it. The completed signed form must be submitted via the ECS Handin system with the conference paper. An incomplete form (e.g., with missing signatures) means that the entire ECS Handin submission is incomplete and therefore subject to penalties.

Teams are encouraged to split the work evenly between all team members (in which case the marks split evenly). They are advised to consider any proposed non-uniform distribution very carefully before submission. Any proposed non-uniform distribution will be discussed with the team after the presentation and may be subject to modification by the module leader at that stage.

'Failure to agree'

Teams are advised to make every effort to agree on the marks distribution because failure to agree will be interpreted as demonstrating a general lack of competence.

However, the procedure to follow if there is no agreement is set out below: The team should divide into two or more subteams (in the worst case, a team of size 'N' could have 'N' subteams). Each team should elect a subteam leader, who should make a full submission as detailed above. Each marks distribution form submitted should indicate proposed percentages of the overall team marks to be allocated to the members of that subteam, with a written one-page explanation of why such an allocation would be appropriate. It should be noted that any attempt by a team member to exploit the advice above (that teams should make every effort to agree) by, for example, refusing to sign the marks distribution form will not be successful (in the unlikely event that this happens, each individual should make a brief signed statement as to the facts of the case and submit this with the other documentation).

The final marks breakdown for a team that fails to agree will be determined by the module leader, taking all relevant factors into account. This decision will be final.