BENVGSC4: Spatial Data Capture and Analysis
Assessment Guidelines

This document serves as a guideline on how the module coursework will be assessed and how the total marks will be broken down.

The assessment is based on group work, with students split into groups of four. Groups will be required to submit a website describing the analysis and visualisation of a dataset chosen by the group. Each student is required to also submit an individual report about the process and rationale behind the data analysis and visualisation project.

Grades will be awarded individually for this coursework, although a proportion of the mark will be assessed on a group basis (as outlined below). This coursework represents 100% of the overall module assessment.

Overall Breakdown of Assessment

Group website - interactive visualisation, analysis of dataset and group presentation **60%**
Individual report - 2,000 words (+/- 10%) **40%**

Key Dates for 2015/2016

Group pitches of project idea – Wednesday 23rd March - CASA Student Space - 2pm-4pm
Group presentation of website - Friday 20th May – 25 Gordon Street 105 - 10am-1pm
Individual report submission via Moodle, and paper copy to Lisa Cooper - Friday 27th May - 5pm

Assessment Guidelines

Group Pitches
5 - 7 min presentation with 3 minutes for questions

This presentation is rough overview of the group work, the identification of a relevant dataset, how they attempt to analyse the data and what the group aims to achieve at the end of the project. It is important to note that groups will not be held to what they present, and amendments can be made later on. The aim of this informal presentation is to ensure sure students have an achievable goal within the timeframe and to source valuable feedback from tutors and the rest of the class.

This pitch is **not assessed.** Due to time constraints we expect **at least 2 people from each group to present** but we expect all members of the team to contribute to the presentation (i.e. be present at the presentation and able to answer question from the group).

Group Website – 60% of overall individual mark

This website is the main component of the assessed group work for this course. Groups are required to create a website, with multiple pages that convey a story about a dataset that has been sourced by the group. As a *bare minimum*, this website should contain an interactive visualisation, a graph of data values, a description of the analysis, a link to the source data, and a short explanation of the project.

The website should be interactive and pull data from a database linked to a server side component. Analysis results may be pre-processed and results recorded in the database, then visualised on the website in the

form of graphs, maps etc. You are expected to demonstrate the full extent of *advanced* data analysis and interactive visualisation skills you have been taught during this course. You are furthermore expected to make use of those tools taught on the course in completing the analysis and visualisation work (e.g. MySQL, Python, JavaScript).

The website will be assessed by the following criteria:

-	Does the project tackle a real world problem?	10%
-	Does the analysis and visualisation tell a compelling story?	30%
-	Have appropriate analysis and visualisation methods been applied to the dataset?	30%
-	Could visualisation/website be published on the web?	10%
-	Design and aesthetics of website	20%

Final Group Presentation – 10% of group mark (6% of overall individual mark)
20-minute presentation (by all members of the group) with 10 minutes for questions.

Each group is expected to produce a presentation showing off the website created, how the group carried out the analysis of the dataset, the limitations of the analysis and how the interactive tool works behind the scenes. It is important to note that lecturers and researchers from CASA will be invited to the presentation sessions, so do not assume any prior knowledge of your project or its purpose.

Groups should detail what works, and potentially what doesn't work, and any future modifications that could be made given more time. Questions and feedback may be provided by the tutors or the class and can be referenced in the individual report.

The presentation will be judged on the scope (30%) and execution (30%) of the project, demonstration of teamwork (20%), and clarity of presentation (20%).

This presentation is a formal presentation and contributes 10% to the mark you receive for the group website (e.g. 6% of your overall final mark). We expect **all members of the team** to contribute (i.e. talk) and present their individual contribution to the group project (as a rough guide, each person should allow 5 minutes for their part of the main presentation).

Individual Report – 40% of overall individual mark
2000 word individually written report (+/- 10%)

Each student must write an individual report about the project as a whole, including detail of his or her individual contribution to the project. The reports should include a case of where the project fits in the wider context of research and data visualisation available on the web. Students should specifically outline their own contribution to the project (in each of the components they have contributed to) and how, given more time, they would improve the project.

A rough breakdown of how the report will be marked is as follows:

Description of Project / Fit within wider research context	20%
Description of Rationale and Personal Contribution	70%
- Data handling, cleaning and management	
- Data analysis and major findings	
- Data visualisation	
- Technical integration between elements	
- Personal contribution to the project	
Presentation and style of report	10%

Individuals Contribution to Group Project

To ensure that each group member contributes equally to the completion of the project, group members will be given the opportunity to assess their peers. These scores will be used in weighting the overall mark these individuals receive from the group project score (these scores will not impact on the individual report score).

You will be asked to score each of your peers out of 10, **reflecting how much you think they have contributed to the project**. If you feel each team member contributed equally then give all of your peers 10 out of 10. If you feel two members have contributed equally to yourself, and one less so, assign two peers 10, and the other a lower mark.

IMPORTANT: This process in included only for insurance. We expect all team members to work equally and as a team. You should discuss any potential deviations from equal marks (e.g. 10 for each member) within your team before submitting. You should be prepared to justify your own scoring of others if necessary. Scoring should be based on contribution to the work alone, not on personal relationships or friendships within the group. You may be asked to justify negative scoring, and your scoring may be adjusted if it is deemed unfair. At last resort, if you have any major issues within your team you should talk with Ed or Steve.

Here is an example matrix of scores for an imaginary group and how the group project mark (total out of 60%) would be assigned to each group member:

Assuming group has achieved 100% for group project

		Peer Received Mark			
		A	B	C	D
Peer Given Mark	A	-	7	5	10
	B	10	-	6	10
	C	10	7	-	10
	D	10	8	4	-
Mean Peer Mark		10	7.33	5	10
Resulting Weighting on Group Mark		1.0	0.73	0.5	1.0
Final Individual Score for Group Work (Weight * Group Mark)		60%	44%	30%	60%

These scorings are totally **anonymous** and will be submitted individually online. Voting will take place after Group Presentations.

Examples of Online Visualisations

Here are a few examples to get your minds working. We do not expect the level of quality or detail that some of these projects go into. However this list should serve as a guide of the types of analysis and visualisation we are looking for.

- How Americans get to Work - http://flowingdata.com/2015/01/20/how-americans-get-to-work
- NYC Taxis: A day in the Life - http://nyctaxi.herokuapp.com
- London Bike Share Map - http://bikes.oobrien.com/london
- A Month of Citi Bike- http://projects.newyorker.com/story/citi-bike.html
- Trace Media Flickr Cities - http://www.tracemedia.co.uk/luminous/flickr
- Global Slavery Index - http://www.globalslaveryindex.org/findings
- Ebola Timeline Map - http://simonbjohnson.github.io/Ebola-Timeline-Map
- Interactive NBA Followers Map - https://interactive.twitter.com/nba_followers

Examples Datasets

We'd encourage you to find an interesting dataset that you all want to work on. Here are a few examples in case you are struggling to find one.

- NYC GPS taxi data - http://chriswhong.com/open-data/foil_nyc_taxi
- Beijing GPS taxi data - http://research.microsoft.com/apps/pubs/?id=152883
- UK Land Registry house sales data - http://landregistry.data.gov.uk
- NYPD Stop and Search Data (requires Google account) - https://bigquery.cloud.google.com/table/nypd-data:nypd.stop_and_frisk
- Transport for London Open Data: http://www.tfl.gov.uk/info-for/open-data-users/
- Flight data (requires Google account) - https://bigquery.cloud.google.com/table/bigquery-samples:airline_ontime_data.flights
- Oceanic Weather Data (requires Google account) - https://bigquery.cloud.google.com/table/data-dives:datadives_public.ICOADS_2014_Oceanic_Weather