

## 300COM / 303COM Detailed Project Proposal

The detailed project proposal is a graded component of the Final Year Project and is worth 10% of the overall project mark. **Deadline:** Upload your completed form to Moodle by 23:55 pm on 10/11/2014. using the filename convention:

Lastname\_firstname.doc

**Please complete all sections.**

First Name:	
Last Name:	
Allocated Supervisor Name:	

### SECTION ONE: DEFINING YOUR PROJECT

#### 1.1 Detailed research question

**Help:** Your detailed research question is a refinement of the research question you proposed on the project allocation form. You must do this even if you selected a 'suggested project'. Refining the research question involves narrowing down the initial question until it is answerable using a primary research method(s) that you conduct during the six months of your project. The refined research question must not be so general that it is answerable with a yes or no answer. It must not be so broad that you would be unable to achieve a solution during your project. The key to this is BEING SPECIFIC: Narrow down the method or technology you will use, narrow down the group that the question refers to. Avoid using words that cannot be measured, by you, without a huge research budget e.g. 'effects on society', 'effects on business'. *Example:* The initial question "Does cloud computing effect business" needs narrowing down (*for a start the answer is yes*) What is meant by cloud computing? or 'effect'? or 'business' in this question? Refining this first question will involve narrowing it down to something you, personally, can measure. A refined version of this question might be: "Does implementing a cloud based voting system improve the speed of decision making in a small company in Coventry?" This refined question is implementable: You can now identify a small company to work with, document their current decision making processes, implement a cloud based voting system, compare decision making speeds over a limited time period (say 1 month) and evaluate your findings. *A small piece of genuinely new knowledge is produced.*

Does data analytics prolong the longevity of organisations within mobile telecommunication?

#### 1.2 Keywords

**Help:** Include up to 6 keywords separated by a semi-colon ; What keywords are appropriate to

describe your project in an online database like Google Scholar? Keywords should include the general research area and the specific technologies you will be working with. *Example.* a project that proposes a novel way of visualising large amounts of twitter feed data may have the keywords: Data visualisation; twitter; hashtags; database design; graphics libraries. For further help take a look at the ACM keywords list <http://www.computer.org/portal/web/publications/acmtaxonomy>

Data representation; data visualisation; analytical programming; analytics; statistics; database;

### 1.3 Project title

**Help:** The project title is a statement based on your detailed research question. For example, The research question 'to what extent does a mobile application reduce the number of errors made in class registers at Coventry University in comparison to current paper based registers' may be stated in the project title: *"A wifi driven mobile application for large group registers"*.

Developing a model to illustrate the significance of data analytics within mobile telecommunications.

### 1.4 Abstract

**Help:** An abstract is a short summary of a research project that enables other researchers to know if the report is relevant to them without reading the whole report. It is usually written retrospectively so that can include findings and results. It is fully expected that you will rewrite your abstract when you come to write your final report. For now however you should write an abstract of about 250 words that define the project. Before writing your abstract you **MUST** read some abstracts from conference or journal papers on *Google Scholar* or from *portal.acm.org* (to understand their style) and then provide your own abstract that outlines what your question is and what you 'did' to answer it.

Data analytics is an entity which can be best described as statistical research, to establish a pattern or trend, amongst a data set.

The purpose of this project is to highlight the key benefit data analytics holds in driving a company forward in mobile telecommunications. Understanding that obtaining key insight regarding potential customers, will enable organisations to statistically plot their next move in terms of taking on more customers. Also, this same insight will allow organisations in mobile telecommunication to retain current customers by ensuring that their customers receive the correct services: all this is achievable by the successful implementation of data analytics. Amongst all this, there are organisations that do not fully utilise data analytics to their capabilities and rely on other techniques such as data mining. Even though other techniques do indeed have their own advantages, without incorporating thorough data analytics, organisations lack the ability of staying ahead of their competitors and ultimately, leading to little customer retention.

Initially I will research the benefits and importance of data analytics, and how constructive implementation of data analytics allows an organisation to stay ahead of their competitors, within mobile telecommunications. In addition to this, I think its essential to grasp a true understanding on why data analytics is essential to those organisations who choose to implement it fully. In order to complete the project, a model will be created using SAS Enterprise Guide & SAS Enterprise Miner; proposed and completed for my placement.

## SECTION TWO: YOUR RESEARCH PLAN

### 2.1 Primary Research Plan

**Help:** This is plan as to how you will go about answering your detailed research question - It must

include a primary research method (an extended literature review is not an acceptable primary method). Think and plan logically. Example: In the class register example above "to what extent does a mobile application reduce the number of errors made in class registers at Coventry University in comparison to current paper based registers" - the research plan may involve: 1) Collecting and analysing paper based registers in a given class on five occasions. 2) Identifying the error rate average on these occasions 3) Designing and implementing a mobile application that automatically records attendance in class. 4) deploying the application in the class on five occasions. 5) Identifying the error rate average of the mobile application on these occasions. 6) comparison of data and summary of findings.

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- 1) Analysing other techniques to data analytics and more specifically data visualisation.
- 2) Identifying the problems with using these different techniques.
- 3) Developing a model based on requirements of a set project given by manager using a range of analytical programming.
- 4) Implementing and comparing this model against the existing model, to see whether the existing model can be beat.
- 5) Identifying errors and mistakes with the model built and understanding how these errors and mistakes can be prevented in the future.
- 6) A critical evaluation of the model with a thorough understanding on the reasoning behind why data visualisation is essential within data analytics.

## 2.2 Secondary research sources (key texts for your literature review)

**Help:** Please provide references, in correct Harvard style, to three key texts that are addressing similar research questions to yours in other contexts. If you are implementing an application, select

texts which demonstrate how other researchers have tackled similar implementations? The references should be recent and sufficiently technical or academic. Your markers will be looking for you to identify technical reports, conference papers, journal papers, and recent text books. Avoid *Wikipedia* entries, newspaper reports that do not cite sources, and general or introductory texts.

Spakes, Gary (n. d.) *Four ways big data can benefit your business* [online] available from <<http://www.sas.com/news/feature/big-data-benefits.html>> [09 September 2014]

Exforsys (2008) *Business Intelligence Data Analytics* [online] available from <<http://www.exforsys.com/tutorials/business-intelligence/business-intelligence-data-analysis.html>> [09 September 2014]

CIO Staff (2013) *Using data analytics to achieve competitive advantage* [online] available from <[http://www.cio.com.au/article/457558/using\\_data\\_analytics\\_achieve\\_competitive\\_advantage/](http://www.cio.com.au/article/457558/using_data_analytics_achieve_competitive_advantage/)> [10 September 2014]

## SECTION THREE: IMPACT AND PLANNING

### 3.1 Client, Audience and Motivation:

**Help:** Why is this project important? To whom is this project important? A research project must address a research question that generates a small piece of new knowledge. This new knowledge must be important to a named group or specific client to make it worthwhile carrying out. This is the motivation for your project. In this section you should address who will benefit from your findings and how they will benefit. Example: If you intend to demonstrate that a mobile application that automates class registers at Coventry University will be more efficient than paper based registers - the group who would be interested in knowing/applying these findings would be both

academic and administrative staff at Coventry University and they would benefit by time saved and a reduction in their administrative workload. If you are making a business case for an organisation explain how the organisation will benefit from your findings.

This project is important as it highlights the key benefit of data analytics in the world of mobile telecommunications. The audience can understand how much of a role data analytics plays in ensuring companies keep ahead of the competition, planning strategically yet statistically. The audience will be Telefonica UK as technical aspect will be in form of a project for them. Motivation behind this is due to genuine enjoyment of completion of placement year, whilst acknowledging that number of data analysts not just in mobile telecommunications but in the general market is on the rise.

### 3.2 Evidence of project management

**Help:** How will you plan and manage your time? How will you evidence that you have managed the project successfully and have responded to supervision and feedback? Your final project report will contain a mandatory chapter evaluating and reflecting on how successfully you managed the project, predicted and mitigated against risks, and responded to feedback and supervision. You should discuss in this section what artifacts you will create to evidence this project management. Time plans, log books, records of supervisor meetings, version tracking systems, etc.

Gantt chart will be created with strict thorough adhesion to this. Time will be allocated and planned before undertaking the project. Weekly supervisor meetings will be in place till December where there after, supervisor meetings will be every fortnight. Alongside this, a logbook will be created to record these weekly meetings.

Please upload your completed form to Moodle by the deadline of 23:55 pm on 10/11/2014

**Please ensure you send a copy to your supervisor.**

**Thank you for completing this form**