**April**

Today I continued work on the technical specification which is required to be submitted for the project. It details the work of the project from several areas, from research, implementation and design. I worked on the research, summarising my notes on Optical Character Recognition, on how it works and the reasons for the design choices of the system, switching from a general solution to getting the users to select regions on the invoice. I also summarised my reasoning and justification of the use of a microservices architecture and the benefits over a monolithic system.

I brainstormed ideas out for some other sections, and planned out ideas on what to include as I work on the project. I want to talk about the overall architecture, use cases and how the user will interact with the system and how those interactions work.

**November 18th**

Today I have worked on my Functional Specification for the project. In the functional spec, it is to get us thinking about the functional and non-functional requirements of the system. That is, what we want the project to do and the constraints it has to be done in. In it, I talked about the need for a classifier to recognise an invoice and preform layout analysis using machine learning.

I talked about the business context of the project and how it is from our farm back in Louth. With how invoices are currently managed in the farm, this type of project felt natural to me to want to bring a bit more order so that my Father can spend less time searching and storing invoices manually in his paper filing system and just get on with more business critical tasks to the farm.

For general functionality I talk about the importance for the need to upload invoices, plot graph and have business profiles generated form the info given to the system and how this needs to be searchable. I talk about how this will relate to the layout segmentation of an invoice and the need for an OCR system to accomplish this. I describe the types of user who will use, the people who are interested in the financial matters of the business and how they might possibly need it for expenditure planning in a business, as historical data can be useful for future planning. I give examples of usage and wireframes of what I want it to look like.

![Wireframe of viewing expenditure](/content/images/2016/04/wireframe.png)

Happy with this image. 😀

My supervisor Alex gave me good tips for writing this and that I should really pay attention to the user stories that I submit, that they will form the whole basis of figuring out the design and functionality of the system.

I gave an architecture overview which I will use as a basis when I’m implementing the system.

![Architecture of the system](/content/images/2016/04/architecture.png)

Nearly finished it and shall submit it in a few days once Alex gives the thumbs up.