# UX research and design

I worked through the following 5 layers when developing my UX research and design for this project:

1. Strategy
2. Scope
3. Structure
4. Skeleton
5. Surface

# 1. Strategy

Brief:
My brief was to design and build a data dashboard that would provide an improved user experience when searching for developer jobs online.

Background:
One of the most popular job search engines I use is Indeed.ie to search for developer jobs. When I search using the keyword developer on Indeed.ie today (Tue 16 May 2017) I get 2500+ job posts of interest.

Whilst it is great news that there are so many jobs on offer, my user experience starts to dip as I realise that the job titles and snippets vary greatly – which means I am having to trawl through the adverts one-by-one to get a better idea of what is on offer. The filters on hand (i.e. job type – permanent/ full time or part time, location) are somewhat helpful but ultimately do not allow me as a user to absorb or categorise the adverts quickly. As a result, the user then goes through a time consuming process of scanning and clicking through ads to find suitable jobs to apply for.

# 1. Strategy

Site objective:

1. Provide a simpler/ quicker way of searching for developer jobs on Indeed.ie
2. Eliminate ‘noise’ by simplifying and categorising job posts – which takes away a lot of effort from the user’s behalf to trawl through adverts
3. Provide a way of filtering (and re-filtering) results aligned to a set of typical priorities of jobseekers
4. Provide a summary (and full list) of results for a job seeker, with links to each job post in their results – so that the user experience can end in an actionable outcome

# 1. Strategy

User groups:

1. Jobseekers who are new developers (graduates and experienced hires)
2. Jobseekers who are experienced developers
3. Tech recruiters
4. Career advisors and teachers/tutors

# 1. Strategy

## User persona and user needs:

| User group | Persona | Age and location | Occupation | Likes | Dislikes | User needs |
|---|---|---|---|---|---|---|
| Jobseekers who are new developers (graduates and experienced hires) | Jack | 28, Dublin | Student | Design and UX<br>Gaming<br>Reading blogs on coding<br>Detailed job descriptions | Confusing jargon and acronyms<br>Writing CVs | 1. Find a job quickly<br>2. Filter job posts by the following priorities:<br>• Location<br>• Level<br>• Industry |
| Jobseekers who are experienced developers | Katie | 36, Galway | Back end Developer | Robotics and AI<br>Drones<br>Summarised information<br>Flexibility on using different tools and languages in her job | The amount of frameworks that exist | 1. Browse job posts from time to time<br>• Location<br>• Role-type (as his expertise is in back end dev as opposed to front-end)<br>• Company |
| Tech recruiters | Lisa | 41, Cork | Tech recruiter | Working with start-ups<br>Hearing about new innovations | Typos on CVs<br>Phonecalls ending abruptly following the word 'recruiter' | 1. Get stats on jobs – e.g. top locations, industries, companies looking for employers<br>2. Identify the most in-demand skills<br>3. Use the dashboard to advise clients (companies and jobseekers) |
| Career and education advisors | John | 39, Wicklow | Coding bootcamp career advisor | Seeing students succeed<br>Matching students with great companies | Extorting students through unpaid internships | 1. Validate course offerings match skills sought by employers<br>2. Use the dashboard to advise students on job opportunities |

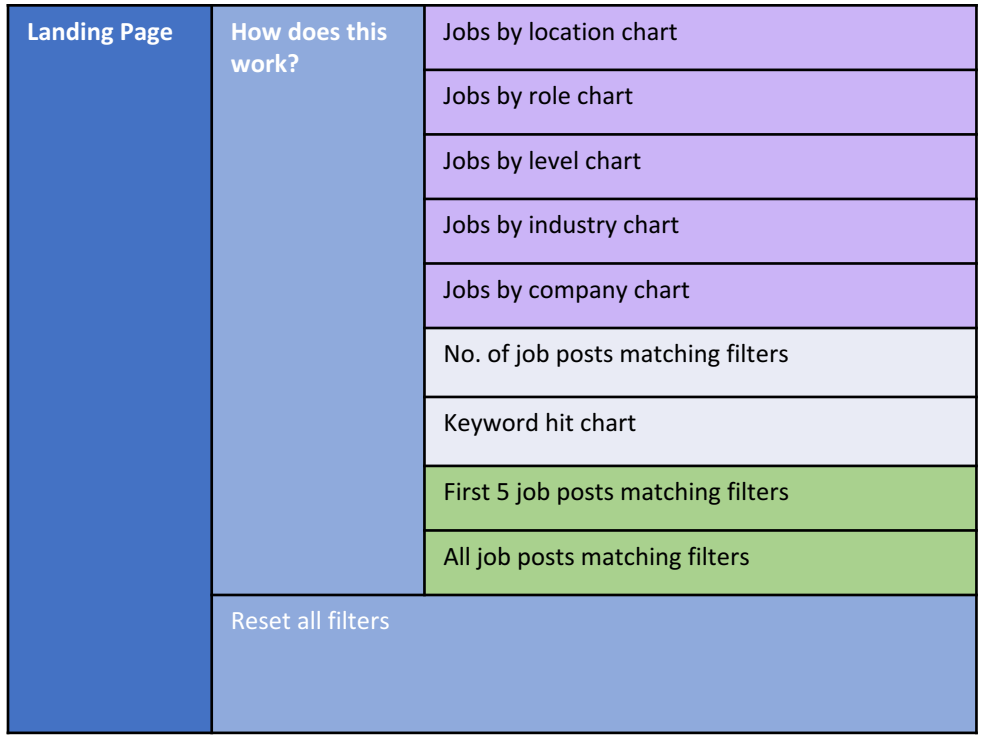
# 2. Scope

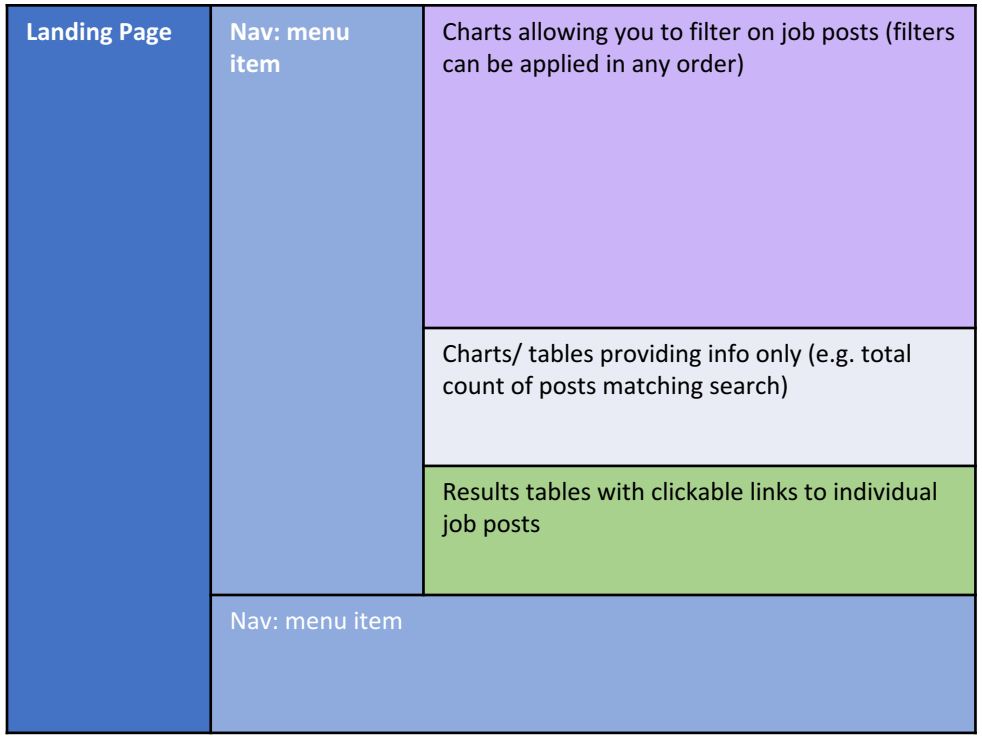
## User tasks in and out of scope:

| Task | In scope | Out of scope |
|---|---|---|
| Filter developer job posts by location, by role, by level, by industry and by company – in any order to narrow search | x | |
| Remove one or more filters to broaden search or reset all filters to start search from scratch | x | |
| Identify keyword hits | x | |
| Search by keyword | | x (keyword search is a specific search that will return smaller number of results – this functionality already provided by Indeed.ie. The dashboard is more suited to someone who is browsing and open-minded to a wider range of opportunities) |
| Get a summary and full list of results – with clickable links leading to the individual job posts | x | |
| Reset all filters to start search over | x | |
| Search the most recent 250 jobs on Indeed.ie as of March 2017 | x | |
| Search the most recent 250 jobs on Indeed.ie as of today | | x (see further dev ideas for more details) |

# 3. Structure

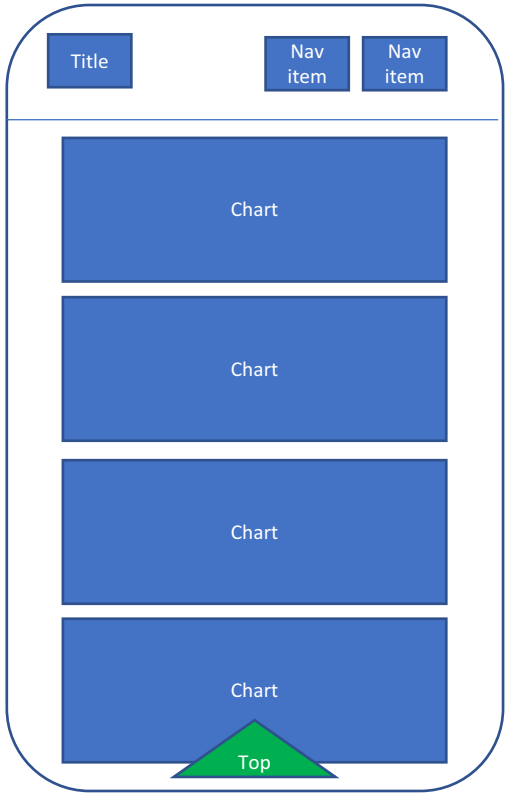
## Info architecture:



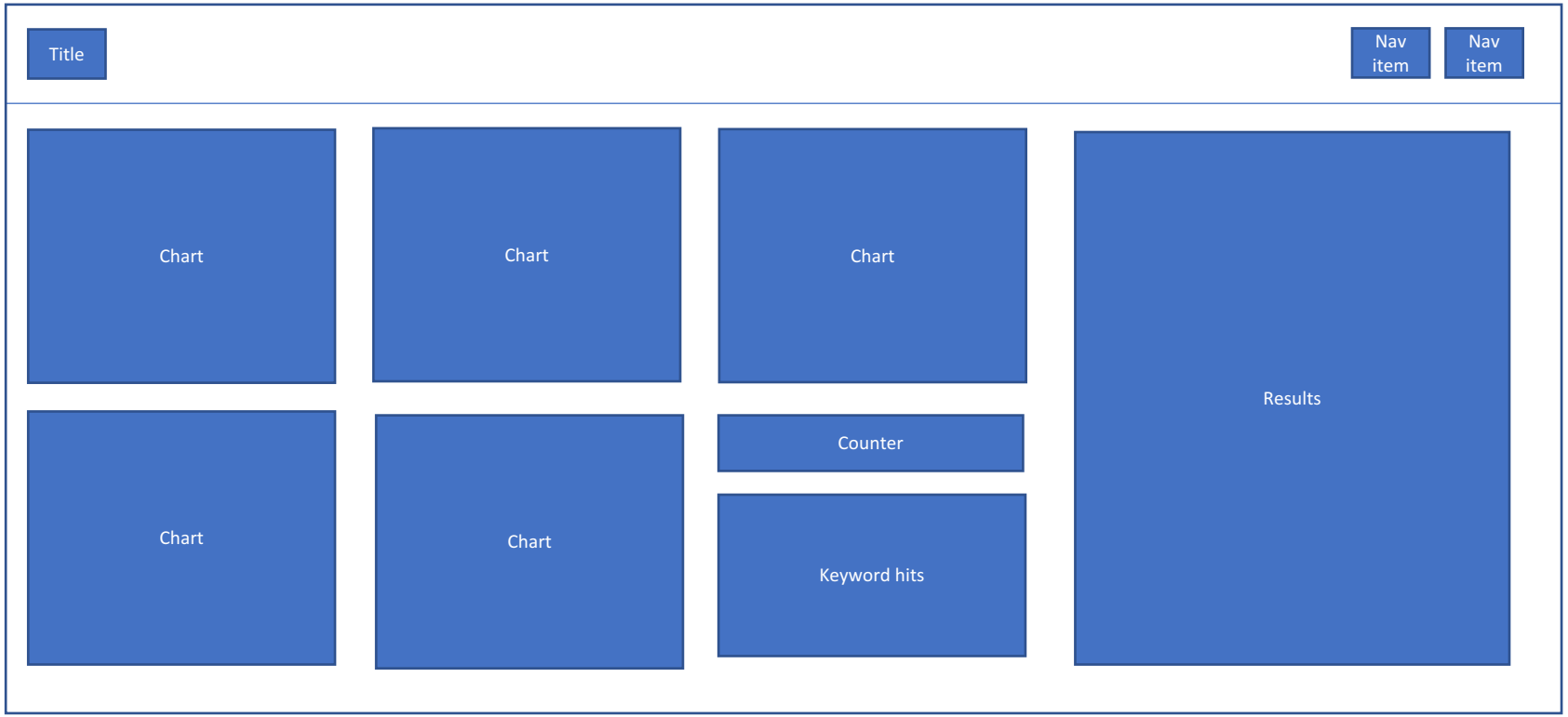



# 4. Skeleton

## Mobile/tablet:



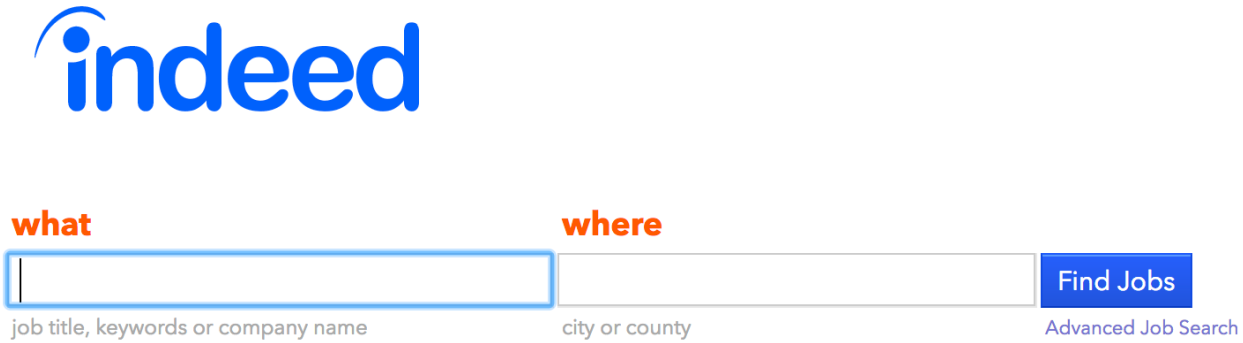

## Desktop:




When building the desktop site, I decided to put the top 5 results in the center of the page (surrounded by all filters) to keep the focus on the most important part of the dashboard. A link was also provided to all results – as opposed to having this on a long list on the right hand side, creating white space on the left when scrolling.

# 5. Surface

## Colour scheme and fonts:




The colour scheme and font is in line with Indeed branding for two reasons:

1. Both the colour scheme and fonts are already tried and tested – they convey professionalism and the simplicity of the colour scheme works well given the dashboard aims to convey complex data in a clear and concise manner.
2. The Indeed Publisher Programme encourages developers to adopt Indeed branding for any projects or websites that incorporate their job search API (which is what I used as my data source).

# 5. Surface

Mock-ups:

The following slides are mock-ups (both mobile and desktop format) that I originally pulled together when designing the website.

Naturally there are variances between the mock-ups and the website as it stands today. The most significant factor that influenced design changes was the result of conversations and a simple survey I ran with my classmates at Code Institute. In a nutshell, I asked them to rank the list of filters (i.e. location, role, level, industry, employer) from most important to least important when searching for a developer job. This helped me tailor the sequence of the charts in the dashboard.

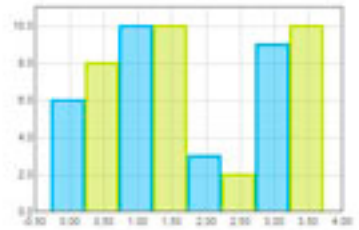
Other inspiration came from looking at other search engines and by browsing sites like stack overflow and codrops.

# Developer Job Search

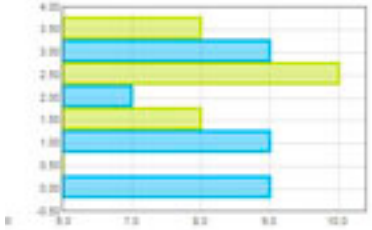
Tour  Reset filters

Developer Jobs by Location

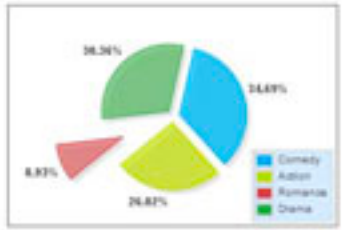
Developer Jobs by Role



Developer Jobs by Level



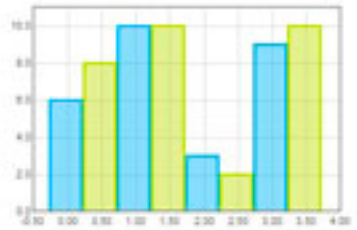
Developer Jobs by Employer



Developer Jobs by Location

| | | | | |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Developer Jobs by Industry



No. of dev jobs in Ireland:
X

No. of dev jobs matching your search:
X

# Further development ideas

I took a practical 'proof of concept' approach to designing and building this dashboard which meant that I focused on working within a simple scope and with a small sample set of data. I've outlined below further development ideas which would form part of a future version of the dashboard:

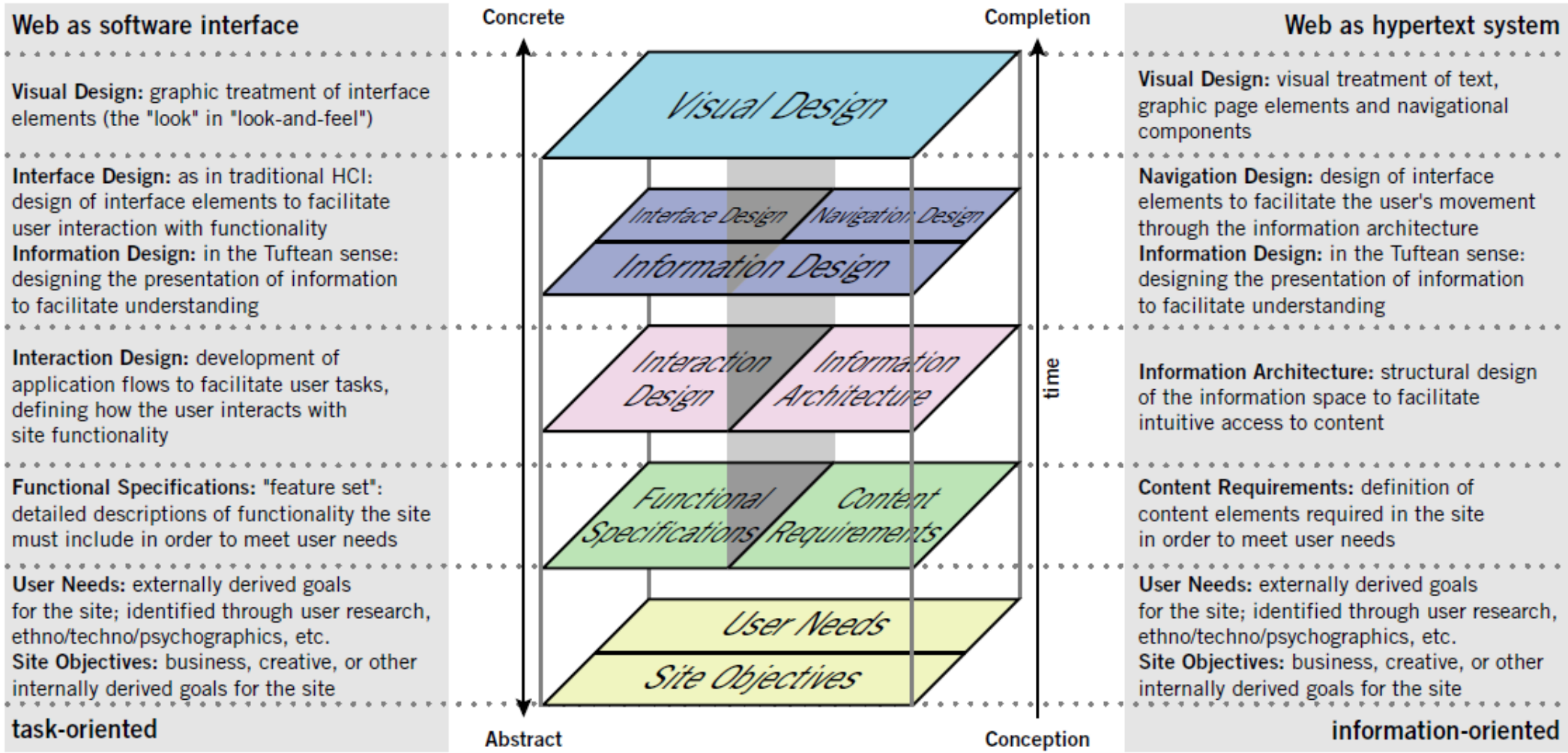
1. Use live/ close-to-live data (as opposed to static sample set)
   - This is possible using the Indeed API, however challenges/ issues I anticipate I'll need to resolve are as follows:
     - Calling the Indeed API only returns a max of 25 results at a time – therefore this would involve writing code to:
       - Query the number of results (i.e. job posts) matching the keyword developer
       - Divide the number of results to identify how many times I need to call the API
       - Run a loop to call the API the required number of times
       - Crosscheck the primary key (i.e. jobid) against the old dataset to delete any duplicate entries
       - Save the data in required json format
       - Automate the regex queries to add the additional data attributes to each row of data
       - Load the data to the dashboard

2. Improve the location chart
   - Use longitude and latitude coordinates along with the google map API to plot the developer jobs on a map (as opposed to today's pie chart)

3. Improve and automate the regex queries to cleanse, validate and assign data attributes more efficiently
   - For this project, I analysed the sample dataset and from there ran regex queries from Mongo Shell to cleanse the data and assign the additional data points (such as industry, job level, role, keyword hits). There is definitely an opportunity to automate this process so that it can be run efficiently on larger data sets.

4. Use multiple data sources
   - For this project, I analysed data on developer jobs from Indeed.ie only. However, there are lots of options in terms of expanding the dataset e.g. look at different job types/industries from the Indeed data, import data from multiple sources (irishjobs.ie, jobs.ie, jobbio).

# Appendix


Web as software interface
Concrete
Completion
Web as hypertext system
Visual Design: graphic treatment of interface elements (the "look" in "look-and-feel")
Visual Design
Visual Design: visual treatment of text, graphic page elements and navigational components
Interface Design: as in traditional HCI: design of interface elements to facilitate user interaction with functionality
Information Design: in the Tuftean sense: designing the presentation of information to facilitate understanding
Interface Design
Navigation Design
Information Design
Navigation Design: design of interface elements to facilitate the user's movement through the information architecture
Information Design: in the Tuftean sense: designing the presentation of information to facilitate understanding
Interaction Design: development of application flows to facilitate user tasks, defining how the user interacts with site functionality
Interaction Design
Information Architecture
time
Information Architecture: structural design of the information space to facilitate intuitive access to content
Functional Specifications: "feature set": detailed descriptions of functionality the site must include in order to meet user needs
Functional Specifications
Content Requirements
Content Requirements: definition of content elements required in the site in order to meet user needs
User Needs: externally derived goals for the site; identified through user research, ethno/techno/psychographics, etc.
Site Objectives: business, creative, or other internally derived goals for the site
User Needs
Site Objectives
User Needs: externally derived goals for the site; identified through user research, ethno/techno/psychographics, etc.
Site Objectives: business, creative, or other internally derived goals for the site
task-oriented
Abstract
Conception
information-oriented