Group Capstone Project Proposal

|  |  |
| --- | --- |
| Student Name: | Kevin Romero |
| Other Group Member Names: | Peter Rudolf, Tyler Segovia, and Mathew Migliore |
| Project Name: | QuickGig |

This proposal form is intended to be completed by an individual who wants to complete a project collaboratively with at least one other person. Many answers may be identical for each group member and these parts may be freely copied/shared, but many sections are individual in nature (e.g. learning goals) and require an individual answer from each group member. Thus, **each group member will submit their own form**.

If you intend to work alone, utilize the Individual Capstone Project Proposal form instead.

Category:

|  |  |
| --- | --- |
| Plan an Application | Develop an Application |
| Analyze a System | Develop a Library |
| Business Plan | Develop an Educational Resource |
| Research Project | Deliver a Technical Presentation |
| Other | Refine an Existing Project |

# Project Description

Specifically, what will you be doing?

|  |
| --- |
| For this project we want to create an app that works like Kijiji (local) and Fiber (gig wise) for users for postings and like indeed for job requests, for people looking to either make a quick buck by doing a quick job like mowing lawns or find a career. We want both the person hiring and the person being hired to make bids on small jobs, you need your lawn cut? Post a picture and specifications of the job you want! People will make bids on how much they are willing to do the work for and you get to choose the best bid. This decision can be based on reviews made about that worker or employer. The app will also notify you based on your profile, jobs that are posted that you would be interested in. The employer will also have various options that allow their gig to be seen on the map and wether or not the worker can post a bid on the job. Furthermore we might want to include transactions being done through the app, where the employer puts down their credit card or a balance, and when the job is complete the worker will post a photo of their job and request the money. Both the employer and the employee will have a layer of security for them to get paid when the job is complete, or the employer to ensure that their money is not stolen if the job is not done, or something has been done incorrectly. Without ever having to interact with eachother. |

# Project Justification

Why have you selected this as your capstone project?

|  |
| --- |
| As someone who has worked a lot of jobs, both the process of looking for a quick job for quick money or doing the job, and not getting paid the amount promised can be painful. This not only helps those looking to earn some quick cash that might not have time for a full time job, or can't find a full time job yet, but also ensures that both the worker and the person hiring are both safe and satisfied. |

How does this project relate to the courses in your CPA program of study?

|  |  |
| --- | --- |
| SYSDE and DBA | This project will implement the methods for effective app development and team work proposed on both these classes. |
| WEBD | This project will use the things we have learnt for web development and use the React JS (popular for jobs) and Express JS (Currently most popular for jobs) frameworks to develop the website. |
| Emerging Technologies | We plan on using NLP techniques in order to use the user's preferences and searches to suggest jobs or gigs based of their written descriptions. Natural Language Processing (NLP) is currently an area in Machine Learning that is new and being worked on in order to find and filter information for both the machine and humans. Example the new B.E.R.T engine from Google. |

How is this project suitable for a group of professional computer programmer analysts?

|  |
| --- |
| We believe that the technologies and methods that will be used in this application if done correctly will be the golden child of our resume. It will not only give us experience in working with React JS and Express which are currently two of the most popular frameworks being used in Enterprises. We will also gain knowledge on using user provided data for fuctionality and business intelligence, by looking at things like searches and preferences to recommend jobs. This also will provide us with knowledge on NLP and Machine Learning, which are methods used in enterpise websites like instagram, google, facebook, etc to process data. This project will also exercise on a larger scale all the analysts methods we have learned through our 3 years at Durham College and will prove not only to ourselves but our employers that we are capable of researching and adapting newer technologies. Finally the main purpose is to show that we are capable of developing an enterprise worthy application. |

Who is the audience for the finished product from this project?

|  |
| --- |
| According to Indeed there are 250 million Unique monthly visitors to their website and about 10 jobs added per second globally in indeed. So there is a market for people looking for jobs, the problem with indeed that it mainly focuses on career jobs, and for gigs in kijiji it does not provide much flexibility or security to the users when makings posts. The problem with websites like Fiber is that they're not really meant for local manual gigs. We want to create an app that mainly focuses on local gigs and gives the user the flexibilitity, security, best prices, and to know who they are dealing with based on previous reviews. With the ability to also post career jobs, pretty much anything work related, from gigs to career. |

How will this project assist you with seeking employment or completing future projects?

|  |
| --- |
| Express JS and React Js are two of the current most popular frameworks for web development in the industry. Source: https://hackr.io/blog/web-development-frameworks  With Javascript being voted as the most popular programming language in the industry by  67.8% of people who completed the Stack overflow Annual Developer Survey and HTML/CSS falling in second voted by 63.5% of people, SQL falling third voted by 54.4% of people and python falling 4th at 41.7% of people. Which Javascript, HTML, CSS, SQL, and python will be used in our project.   source: https://www.mobindustry.net/9-best-frameworks-for-web-development/  Python, specifically Machine Learning is also becoming a popular and in demand programming skill for jobs. With javascript for app and web development falling in first.  source: https://www.fullstackacademy.com/blog/nine-best-programming-languages-to-learn |

# Resource Identification and Group Structure

What resources will you use to assist you in completing this project?

|  |
| --- |
| We will be using youtube, reactjs website, w3schools, and any other site we can leverage to help us learn the technologies needed. |

Are there any specific contacts or resources you might need provided in order to start and/or complete this project?

|  |
| --- |
| We would like to implement a secure payment feature on our web app, sort of like Uber where the user will need to enter their credit card or have a balance before they create a posting, to ensure that the person hiring is able to pay, and the work is able to identified incase of any crimes. We will probably not include this feature for the capstone itself but we would like to know the ethics behind this, the tax laws, and any extra information that goes along with this. We will also need fundings for a domain and host but I'm not sure if this is something that the school can provide. |

What people on campus might be able to provide guidance or assistance for this project?

|  |
| --- |
| First and foremost KYLE CHAPMAN (the one and only), we will try leveraging resources from the AI Hub and hopefully Amit Maraj. |

For each of your group members, list their name and their specific strengths that will allow you to complete this project together:

|  |
| --- |
| Peter Rudolf: detail oriented, focused, punctual, team skills, and adaptable.  Mathew Migliore: Patient, Focused, creative, skills in video editing and music editing. Tyler Segovia: Organized, punctual, self-driven, creative, and problem solver.  Kevin Romero: knowledge with external AI and external web dev projects. |

For each of your group members, list their name and any specific roles and responsibilities that have already been identified (and yes, there should be some):

|  |
| --- |
| Mathew Migliore: Front-end design, Application presentation/Trailer/Demo, database.   Tyler Segovia: Front-End, Back-end Development, and database.   Peter Rudolf: Back-end, Front-end and ai assistant, and database.   Kevin Romero: Main Natural Language Processing, second Back-End, front-end assistant, and database. |

Why do you feel a group this size is necessary to complete this project?

|  |
| --- |
| I believe that the web app we are trying to make is very feature reliant, and the more features it has the more valuable it is. Subjects like NLP and Machine Learning can be hard to tackle but with more people we can get more work done and have more of these features. |

If there is conflict or inequitable work distribution among the group members, what type of action will you take to solve this problem?

|  |
| --- |
| We will have weekly meetings, where we will talk about what we have been working on for the week, what we want to get done by next week, and who will be working on it. For the weekly meetings we will discuss what's working and what isn't working between us as group members, and if there is any conflict, we will work on changing the task that person is doing and who he is doing it with. We will try to understand what is happening and what isn't, but if the team member continues sabotaging the group on purpose we will bring this up with the professor as soon as possible. |

# Project Outcomes

What do you expect to learn from this project?

|  |
| --- |
| Solidify our web development skills, learn reactjs and express, learn how NLP works, and solidify our programming and team work skills as a whole. |

What value will this project bring to someone else?

|  |
| --- |
| Due to the covid-19 a lot of people have lost their jobs, and are looking for jobs or a way to earn quick cash. We believe that this not only allows people to look for jobs but also find ways to make quick cash within the community, just from something as simple as mowing lawns or moving boxes. People who also need quick jobs done benefit from the commodity of posting an ad for people to give a competitive price with a bid. Not only do they get the best price, they also get a choice of people (with reviews), and they get the extra layer of safety that they will not get robbed or ripped of. |

What, if anything, will happen with this project after the end of the semester?

|  |
| --- |
| Depending on how well we complete it and the impressions that we get, if it's something competitive and valuable, then we will like to pursue it. |

How do you plan to demonstrate, publish or distribute your project when it is complete?

|  |
| --- |
| We will have to host it online probably using asw or netifly, we would also need to buy a domain. To demonstrate it, we plan on making a professional video demo/trailer to show it off. To distribute it, it is a web app so people can search it up, we plan on sharing it mainly through social media. |

# Preliminary Project Timeline

How many hours do you expect to work on this project this semester, both individually and as a group?

|  |
| --- |
| Individually we are aiming for 10 hours extra curricular plus the 5 hours of the class. So a week indiviually we are aiming for atleast 15 hours. With about 10 weeks left that gives us 150 hours individually for the semester. and for us as a group we are aiming for 600 hours.  Since this is something that is going to help us for a resume we will try amining for more. |

What do you expect your group to have done by Week 6?

|  |
| --- |
| We expect to have the main page, login, register, post, and profile working, and we expect to have start the main features like nlp by this period. |

What do you expect your group to have done by Week 8?

|  |
| --- |
| We expect to have most pages working with minimum bugs, we expect the text extraction to be semi functional, and the video demo will start around this time. |

What do you expect your group to have done by Week 10?

|  |
| --- |
| We expect all used pages to be complete, video demo/trailer/presentation to be complete, and the nlp features to work at least at basic level. |