**Final Year Project Proposal**

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**Suggested Supervisor**:

Faculty Member’s Name: **Miss. Sara Rehmat**  Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Project Details**

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| **Project Title** | **FAST Alumni Network Analysis** | | |
| **Project Area of Specialization** | Graph Theory, Social Network Analysis, and Data mining. | | |
| **Project Start Date** | 2021-03-9 | **Project End Date** | 2021-12-25 |
| **Project Summary** | Most Universities don’t keep track of their alumni progress in their professional life. Many alumni and students get jobs or start their businesses but the universities or the Higher Education Institutes don’t have a mechanism to track their progress or supervise their students. Due to which there’s a huge void in communication between the alumni, the university’s administration, and the graduating students.  As there is a huge potential in the alumni to benefits the graduating students and improve the image of their alma mater, a platform is proposed where all the concerned can socialize and share productive and inspiring content and ideas. The Alumni can easily communicate, share ideas and guide students in their respective fields by organizing events, workshops, or mentorship programs.  They can also suggest job opportunities to the fresh graduates or ideas for FYPs for the final year students.  The platform to be built first needs to mine the existing social networks for the information of FAST alumni.  Universities can use the data generated from this platform to analyze the job market trend and can create/update the curriculum accordingly. | | |
| **Project Objectives** | The broader objectives of our project are the following:   * To create more job opportunities for students within the minimum time. * A platform where students can take inspiration from their alumni. * Remove the gap between university, alumni, and students. * To keep students and faculty updated about more trendy topics in the market by taking help from the experience of alumni. | | |
| **Project Implementation Method** | We are going to scrap the data of the FAST alumni from social media. We will use that data to create a network of alumni, students, and faculty. The network will be analyzed in different ways using different graph algorithms to deduce different patterns. The patterns can then lead to creating links among alumni and students in a separate or existing social network. The network analysis will also lead us to show trends in the current job market and provide opportunities to the graduating students. | | |
| **Benefits of the Project** | * We are going to develop a Social networking web Application that will connect students, teachers, and FAST Alumni in one platform. * The app will take data of alumni from different social media platforms through API to create their profiles. * Students’ signup through nu email or LinkedIn profile and can communicate with each other. * The teacher can easily update their curriculum by taking market trends. * We can know the job market by seeing graphs. * We will have data on our graduates and their presence in the market. * Students can contact their alumni and ask for help if needed. | | |
| **Technical Details of Final Deliverable** | * We use graphs for data organization, and flow of computation. * We use graph theory in our project in which we consider each student, alumni, and teacher as a node, and if a student likes, follow the alumni profile then that is considered as the edge between the two. * We are going to develop a web application that is based on Social networking analysis (SNA)  a process of investigating social structures through the use of [networks](https://en.wikipedia.org/wiki/Network_theory) and [graph theory](https://en.wikipedia.org/wiki/Graph_theory), that will be tracking the Alumni, create/update the curriculum. * The framework which we use in our project is React as Front-end and Django as backend. | | |
| **Final Deliverable of the Project** | An alumni social network web app where students, graduates, and university can communicate, share ideas organize events and workshops. It will be been an analysis tool for universities to keep track of alumni progress, job market trends. | | |
| **Type of Industry** | Academics. Social Network | | |
| **Technologies** | **Tools**:   * React. * Node.js * HTML/CSS   **Technologies**:   * Python * Django * Graph traversal and search algorithms. | | |
| **Sustainable Development Goals** | * Communication and Knowledge growth * Reduced Time to interaction * New Job Opportunities * Goals and Experience sharing | | |

**Project Key Milestones**

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| **Elapsed time in (days or weeks or month or quarter) since the start of the project** | | **Milestone** | **Deliverable** |
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| FYP- 1  FYP- 2 | | Scrapping the existing social networks for the information of FAST Alumni and building a network  A platform for interaction among the faculty, alumni, and students. Which can also be analyzed for current job trends. | A network of FAST Alumni  An online app for interacting with FAST alumni, getting inspirations for FYPs, and opportunities for jobs |

**Project Equipment Details**

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| **Item Name** | **Type** | **No. of Units** | **Per Unit Cost (in Rs)** | **Total (in Rs)** |
| **N/A** | **N/A** | **N/A** | **N/A** | **N/A** |
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