UNIVERSITY OF ENGINEERING & TECHNOLOGY LAHORE
DEPARTMENT OF COMPUTER SCIENCE
Tel. +92 (42) 9902-9260

Dated: 06-02-2023

FYP Call for Project for Session 2020

It is notified for the students of session 2020 that they have to develop the idea of project and write the proposal according to the following guidelines:

- Students will contact the faculty so that faculty can take up their groups for FYP. After interviewing the students, faculty will finalize the groups which they are going to supervise.
- Students can form the **group of minimum three students and maximum four students**.
- Project ideas should be developed in the supervision of advisors only. Independent ideas are not allowed.
- After development of idea, it will be approved from Final Year Project Committee.
- Outcome of the idea development will be the document containing the following headings:
  - Project Title
  - Category of Project (Types can be Software Application, Research Domain and Hybrid) Details of these categories are also attached
  - Project Description
  - Related existing projects
  - Impact of Project on the local community (Justify the impact based on Sustainable Development Goals (SDG) 2030)
  - Expected outcome (Product Details)
- After approval of the project idea, students will be required to write the project proposal for which the template will be provided.
- Following Deadlines will be observed in the process of project initial stage.

Report	Deadline
Finalization of Advisor and FYP Group	March 1, 2023
Development of Idea Document	March 15, 2023
Idea Defence (Presentation + Poster)	March 29, 2023
Project Proposal	May 5, 2023

- All students will shortlist at least one 6-week course to complete, relevant to the project. The course should contain assignments as well. The certificate is required for proof of completion. Each member in the group should target a different course. Shortlisted course details should be submitted on eduko.
- Detailed SRS and feasibility study should be completed according to given deadlines.
- Following Deadlines will be observed for Summer 2022.

Report	**Deadline**
Course Title Finalization	June 3, 2023
Relevant Systems comparison	June 15, 2023
List of use cases and Functional Requirements	June 22, 2023
Feasibility Study	July 4, 2023
Prototype in Figma/JustInMind	July 18, 2023

Detailed use case Text	July 25, 2023
Complete SRS	August 5, 2023
Presentation of SRS	August 5, 2023
Course Completion Certificate	August 15, 2023
Implementation of at least 30% requirements	August 30, 2023

- Learning of Project Toolkit should be completed before July 30. Toolkit is attached with the document.
- Groups should have at least 4 meetings with advisors in summer, for which meeting minutes required to be submitted.

10.7.23
Samyan Qayyum Wahla
Secretary FYP Committee
Lecturer
Computer Science Department
University of Engineering
and Technology, Lahore.

Prof. Dr. Muhammad Usman Ghani Khan
Chairman, C.S. Department
Chairman
Department of Computer Science
University of Engineering & Technology, Lahore.

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Project Categories for FYP Session 2020

Software Application:

In this category, students can develop the software applications with the following constraints:

- Application will be developed using the latest technologies(Technologies/versions of those technologies that are announced in the last 3 years).
- Use of any CMS e.g. Wordpress, Joomla etc is not allowed.
- Standalone android application is not allowed unless data is communicated to the server and it has corresponding admin panel.
- Use of firebase for the database in the mobile application is not allowed.
- Project should have the complexity to be justified as FYP.
- Business Analytics Dashboard is required in this type of application
- UAF: a unique application feature should be mentioned that you want to achieve in comparison of existing application of same domain.
- **Plan of commercialization** is compulsory in this category so that application should earn the user base and revenue.
- At least one relevant course of latest technology stack is required. Proof of the course should be provided.

Research Based Applications:

In this category, project can be further classified into the following subcategories.

- Data Science
- Speech Processing
- Natural Language Processing
- Computer Vision
- Bio-informatics
- Cyber Security

Following constraints should be observed in this category.

- Students have to take at least one relevant course based on subcategory. And course completion certificate is required on the completion of Fall semester.
- Use of built in algorithms/libraries NOT ALLOWED and students should implement all algorithms themselves. For example, if students are using neural network for their model training and they are using some library the effort counted toward their FYP will be consider zero. However, they shall get credit for other parts of the code that they have written.

- Datasets from the local community are preferred. The collection of dataset is not the FYP, it is part of FYP and the collection of local dataset effort shall be counted only 10% to the project. All these dataset should be made public so do not made any collaborations that restrict you to make it available in public space.
- In this category, end product will also be developed. (Latest Technologies are not compulsory). A detail comparison report shall be required that explains how the result have been improved than previous one.
- Plan of submission of research paper to any conference or journal is compulsory in this category.
- The collecting statistics using the simulations or with existing machine learning tools are not sufficient. For example, finding the rules using decision trees with help of some software shall not be acceptable. Similarly, use of simulators is not enough.

Hybrid Category:

In hybrid category, students can select any research domain from the category 2, and commercialize their research idea using the latest technologies.

- All the constraints will be observed in this matter.
- At least one of the KPI from the research or commercialization should be fulfilled.

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Toolkit for FYP Session 2020

Following tools are expected to be used during the development of FYP. Sound Knowledge of these tools is also expected from the students.

- **Project Management Tools:** Project tasks should be managed according to SDLC and available tools should be used for this purpose. These can include the following
  - Asana
  - MeisterTask
  - Jira
- **Project Documentation Tools:** All the documentation of FYP should be maintained in any wiki tools e.g. XWiki, Zoho Wiki etc.
- **Code Versioning Tools:** All the communications of tools should be done through code versioning tools e.g. git/SVN, at the end of project, these versioning tools will be used during evaluation process.
- **Code Styling:** Students should use the best practices for the coding that include proper commenting, indentation and naming conventions etc.
- **Code Documentation Tools:** code should be documented in the way, that its documentation could be generated in the form of wiki. These tools include xml comments etc.
- **Team Communication:** Team communication should be strictly performed through formal methods. These communication proof will have the role in the FYP evaluation. These formal methods should be the following:
  - Slack
  - Email
  - Skype
  - MS Teams/Zoom
  - Record Meeting minutes in case of virtual meeting or in person meetings.

  No other methods should be used for team communication.
- **Professional Writing Skills:** Students are expected to develop good writing skills including writing the professional reports. All the reports will be written in Latex.
- **Project Design Tools:** All the diagrams of design phase and interfaces should be drawn using the professional tools that include:
  - MS Visio/any other UML Tool for software design and database Design
  - Pencil Tool/JustInMind for project Interfaces

Project Complexity

Note: All projects should have a significant portion of software coding and this code should be written by the students by themselves. Use of simulators, templates, CMS, libraries (machine learning, speech, vision,etc) counted as 0% code participation. You can use all these in your projects but that shall not be the counted toward the final project effort.

Minimum number of effort from each student of a team should be **20** working hours per week for summer. So if a project team consist of **N** team members, it should have at least **Y=20*N** working hour effort. All the tasks done should be logged regularly for the proof.

The project working effort should be clearly visible through GIT commits distributed over the year. This shall be the only measurement that considers as effort for individual markings during viva and presentations.