PUNJAB UNIVERSITY COLLEGE OF INFORMATION TECHNOLGY

Senior Project Ideas for Semester Fall 2016

PUCIT Project Coordination Office

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Ideas by Dr. Mehvish Poshni

Title of Project's Idea: ‘Hex’

Abstract:

Develop a game of Hex and study well known Hex strategies with the intent of developing a new winning strategy. The game should come with the guarantee that the computer has a winning strategy if it is the first player on a 7 x 7 board. This is an R&D project.

Title of Project's Idea: “Graph theory Toolbox”

Abstract:

A desktop application that interfaces with sagemath and provides a graphical interface that facilitates working with graph theoretic constructs.

Title of Project's Idea: “Arthiritis Care”

Abstract:

A system for keeping track of patient history, assessment and treatment plan. System should be remotely accessible with configurable prescription generation.
This system will be deployed in an actual setting. Students should be committed towards this goal.

Ideas by Dr. Imran Farid

Project Title: "Visual Scripting in Linux"

Abstract:

Normally, a user of a computer system cannot do much with his computer unless he has access to specialized applications. Advanced users of computers have circumvented this limitation by using scripting languages, to take advantage of available OS resources in an integrated manner. The purpose of this project is to create a visual environment to create scripts for linux operating system. The user of this environment will be a person who may not know any scripting, but will still be able to use the many existing features of linux operating system through a visual environment. The environment will allow creation of flow-charts that will be translated into bash scripts, and then executed from the environment, and the output will be parsed and shown in easy to digest manner. This will increase the utility of a computer system even for people of average or no scripting skills.

Special Instructions:

The students interested in doing this project should have some prior exposure to linux scripting, or should be willing to create a high-quality application that can be used widely.

Project Title: "Automatically Generating Simple Web Applications"

Abstract:

The purpose of this project is to design simple web-applications very qucikly. The user of this application will be asked to write down his requirements in a semi-formal format (to be designed by the students doing this project). The system will then automatically generate ready-to-deploy secure web application, including the database, server-side code and the front-end. This will be of use for setting up quick prototype web applications.

Special Instructions:

The students should have some experience with writing web applications.

Project Title:" Writing a Simple Proof Checker"

Abstract:

A proof checker is an environment that helps a user in checking the correctness of mathematical proofs. Many such environments are available, like Coq, Isabelle, Mizar (these systems actually do much more than just checking for correctness). The purpose of this project is to write a proof checker from the scratch, so that the fundamentals principles of such a system are understood directly. The language in which the proofs are to be written would be very structured and very simple subset of english language. Students will be expected to demonstrate the system with simple middle-level mathematical algebra proofs (of the kind that are done in 6th to 8th classes).

Special Instructions:

The students should be familiar with the basic predicate logic, and rules of inference, that are covered in a discrete mathematics course. Though the language that is to be designed will be very basic, but they will be expected to write a compiler for it using llvm. So the team size should be at least 3 to handle the many aspects of this project.

Ideas by Dr. Shahzad Sarwar

The following projects carry the research and development aspects, both. Students are encouraged to discuss these projects with me before taking any decision; **furthermore, several other ideas are available, as well.**

Project 1: Optical Burst Switched (OBS) Networks for Data Centers

Project 2: Optical Burst Assembling and Scheduling Techniques

Project 3: Internet of Things (IoT): Smart Office Environment for Human Resource Management

Project 4: Energy Efficient Internet of Things (IoT)

Project 5: Studying Computer Science using Interactive Enhanced Video Lecture

Project 6: Charity/Donation Web Portal

Project 7: Multiple Tagging of a File for Mobile and Desktop System

Project 8: Comparison of Manual vs Automatic Author Profiling

In this project, volunteers (humans) will be asked to predict an author's age and gender. After that, automatic author profiling techniques will be applied on the same data and performance of humans and machine will be compared.

Project 9: Author Profiling using Blogs Data (Roman Urdu and English) particularly for gender and age identification.

In this project, blogs data labeled with age and gender information will be extracted from freely available resources. After that author profiling techniques will be applied and compared on blogs dataset. The four broad categories of techniques can be: stylometry based, content based, topic based and sentiment based.

Project 10: Cross-genre Author Profiling

In this project, the training data is on one genre (e.g. tweets) and test data is in another one (e.g. blogs). It will be interesting to apply and compare author profiling techniques for cross-genre author profiling. See PAN 2016 Author Profiling Competition for more details, which was on cross-genre author profiling. http://pan.webis.de/clef16/pan16-web/author-profiling.html

Project 11: GPS-based Community Surveillance System

Project 12: No More Fakes …. Identifying the original and fake/copy of original product

Project 13: SMS-based Information System Interaction

Project 14: Classified Advertisement

Design and development of a software based solution for publishing classified advertisement.

Project 15: Accelerated Advertisement / Publicity

Software-based solution to reach out the targeted audience for spreading advertisements.

Project 16: SMS-based Application

Development of Short Message Service (SMS)-based application(s) in order to improve the processes which would consequently enhance the efficiency of an organization.

Project 17: Parental Control of SMS

This application can be developed for Android, iOS, Symbian, or Nokia phones.

Ideas by Mr. Muhammad Idrees

Idea 1: Translation of a High-level programming language HLPL subset to others.

Abstract: Translation of most commonly used part of one HLPL to some other HLPL.

Special Instructions: Student must be good in programming and data structures and have concepts of parsing studied in automata and compiler courses. Extreme guidance and help will be provided for dedicated group of students.

Technologies: Any programming language.

Idea 2: Computer vision related projects.

Abstract: A number different topics of computer vision can be taken as project under my supervision. Facility: At PUCIT a dedicated Computer Vision Lab is established having Research material/software/ still and video cameras with stands. We have about 6 active researchers in PUCIT faculty in the area of Computer Vision and Image Processing.

Special Instructions: Student must be excellent in mathematics especially Linear Algebra and good in programming. Extreme guidance and help will be provided for dedicated group of students.

Technologies: Either of MatLAB, Java, C/C++, Python, R..

Idea 3: Robot Programming.

Abstract: Using simulators (we may have a NXT robot in future), exploring various ideas and developing projects.

Special Instructions: Student should be good in C/C++ and have know-how of the hardware internal working.

Technologies: .NET/JAVA/ C/C++.

Idea 4: Learning Responsive HTML/related technologies (some small pilot projects).

Abstract:
Developing a set of smaller sized web projects using state of the art HTML-5 and related technologies. Main emphasis on this project is on learning and development of a framework through experience.

Special Instructions: Students should be a self-learner and good is programming.
Technologies: HTML-5/Javascript/xhtml/css/xml

Idea 5: Integration of Alchemi to IIS/ASP.NET for computation hungry web applications.

Abstract: Alchemi (http://www.cloudbus.org/~alchemi/index.html) is an open source, .NET based grid computing system to run computation hungry programs. Basic objective is to integrate the Alchemi with an ASP.NET application to scale out, when needed.

Special Instructions: Students should be a self-learner and good is programming. Technologies: .NET and/or JAVA

Ideas by Mr. Asim Rasul

Project Title: E-Performance Analyzer

Abstract:

A system which Analyze the performance of students on the basis of previous GPA/CGPA, Subject Fail/Pass, Batch wise, Dropout ratio, Semester work load , gender basis, and identify problem areas and facilitate the administration of PUCIT for performance improvement on the basis of historical data.

Project Title: E-Grade Point Average (GPA) Predictor

Abstract:

A system which predicts the GPA/ CGPA of upcoming semesters and final status of degree on the basis of some correlated subject's marks and GPA/ CGPA of previous semesters. Prediction process will base on the mean and correlated values of historical data. This predictor facilitates the students and administration of PUCIT for performance improvement.

Ideas by Mr. Kamran Malik

Project Title: Exploring the applications of IBM Watson Questioning and Answering System

Details: http://www.ibm.com/smarterplanet/us/en/ibmwatson/developercloud/

Project Title: Exploring the applications of Google Prediction API

Details: https://cloud.google.com/prediction/docs

Project Title: Exploring the Microsoft Azure Machine Learning API

Details: http://datamarket.azure.com/dataset/amla/text-analytics

Project Title: Exploring the Amazon Machine Learning API

Details: http://aws.amazon.com/machine-learning/

Project Title: Comparison of Sentiment Analysis API of above mentioned URLS

Project Title: Development of Urdu Natural Language toolkit. Toolkit includes tokenization, lemmatization/stemming, Part of Speech (POS) Tagging and Named Entity Recognition (NER).

Project Title: Urdu Language Modeling using Neural Network.

Project Title: Development of Urdu Sentiment Analyzer

Project Title: Development of Urdu Phrase Chunker (Noun Phrase, Verb Phrase etc)

Project Title: Text Summarization algorithm for Urdu.

Project Title: Questioning and Answering system for Urdu

Project Title: Development of Urdu Word Vectors and its intrinsic evaluation.

Ideas by Dr. Shahid Fareed

1. Garment Search (Android App)

   Garment Search android app will serve as an online search for the desired brand outfit in Pakistan and will provide a platform for people to search and know details about the certain cloth of any brand, according to the match found it will provide you the whole information about that specific product. Our project has only the aspect of development.

   Today in an era of Fashion every one wants to be unique and more specified about their outfit and they want a quick and easy access to that desired outfit which they have seen somewhere and longed to have that. The app will provide them place where they can upload a picture that they have taken of any person in a particular dress, in this way they can search freely as well as quickly about that dress and can get the whole information without any cost and check out whether their request belongs to any of the specific clothing brand or not, further more it tells its original price, its views and its availability.

2. Location based Alarm

   People may have different work at different places. They may forget to keep track of all the work which is associated at different places. So we proposed a system where user will be reminded about his work at certain place where the work is associated with. This system tracks the user location with the help of GPS. System retrieves the user's current geological coordinates, with the help of this system tracks user's current location.

   (see further details at: http://nevonprojects.com/mobile-location-alarm)

Ideas by Mr. Umair Babar

Project Idea No.	01
Teacher's Name	Umair Babar (umair.babar@pucit.edu.pk)
Project's Title	Hostel Management System
Project's Abstract	Hostel management is a very tedious process; administration has to spend a lot of time in the said purpose. To overcome their headache a useful web based application should be build includes data about students, there rooms' allocation and evacuation, guest details and information about vacant rooms.
Preferred Technologies	Microsoft C# or Java Microsoft ASP .NET or JSP Microsoft SQL Server or Oracle
Number of Students	03

Project Idea No.	02
Teacher's Name	Umair Babar (umair.babar@pucit.edu.pk)
Project's Title	AMAR – A Communicator
Project's Abstract	Two friends X and Y are communicating on a messenger, suddenly internet goes down for X, and the link is broken, X asks for SMS chatting to Y, but Y has no credit or SMS package. Now both can't communicate to each other. The idea is to resolve this issue and make them communicate by having different medium of communication (X with SMS and Y with internet) by building an application which can send/receive messages via SMS or internet at the same time. Some additional features of this app are: • Group Chat • Image Sharing • Audio Sharing • App Lock • Capture the pic, if someone enters wrong password
Preferred Technologies	Java (for android) or Microsoft C# .NET (for windows mobile)

Number of Students	04
Project Idea No.	03
Teacher's Name	Umair Babar (umair.babar@pucit.edu.pk)
Project's Title	The Guardian – An Application Locker
Project's Abstract	In today's world smart phones becomes an essential part of our life, not only to keep in touch with others, but to carry a lot of important data in it. Obviously, we don't like to share our smart phone to our friend. But some time you may not refuse your best friend. We all have some private stuff you don't want to share. In this case App locker comes into the light to secure our mobile data. This project may have these features. • Lock individual App • Lock group app • Lock Private site • Pattern lock • Face recognition lock • Location lock. • Recovery method to recover password
Preferred Technologies	Java (for android) or Microsoft C# .NET (for windows mobile)
Number of Students	03

Project Idea No.	04
Teacher's Name	Umair Babar (umair.babar@pucit.edu.pk)
Project's Title	Escape from Darkness
Project's Abstract	Aqaaf is a student of black magic who tries to play with Dark, while playing with it, he made a great mess for which his family got cursed and turns into sculptures, unfortunately. Now, he wants to save his family from this course. The only way to save his family is to play with Demon Maser in his Game, in his world. He trade his soul to the Demon Soul Master, to get into the demons world. Here the games begin. The player has to solve maze to defeat the Demons and get to the next level to reach the ultimate level and get Jewel of Light to free his family from the curse.
Preferred Technologies	Java (for android) or Microsoft C# .NET (for windows mobile) UNITY 3D IDE
Number of Students	03

Project Idea No.	05
Teacher's Name	Umair Babar (umair.babar@pucit.edu.pk)
Project's Title	Virtual Tour of PUCIT- NC
Project's Abstract	Imagine yourself setting on a chair on your home/work place and wanted to visit PUCIT-NC without taking a step. To achieve this, an idea is proposed to develop a virtual reality based project, which will cover a complete tour as a guide of the new campus PUCIT. This tour will be having 3D views of the buildings of university campus, and 3D views of the class rooms also. The map of PUCIT as a guide will also be integrated in the virtual tour. This virtual tour will be developed in a way that it will take care of the premises and restricted areas of PUCIT NC, which will not be covered in the virtual tour project.
Preferred Technologies	Java (for android) UNITY 3D IDE Maya software for 3D viewing VR BOX / Gear VR Samsung / Oculus
Students	04

Ideas by Mr. Abdul Khaliq

1. Title of Project's Idea: SMS based student Information System
2. Title of Project's Idea: Social Network for the University of The Punjab
3. Title of Project's Idea: Media Zone (to manage cable channels)

Ideas by Mr. Asif Sohail

1. E-Lab for PU health center

In the current working of PU health center, the Lab reports have to be collected manually. The project is to facilitate PU staff, faculty and students. The user will be able to access the lab reports online and a sms will also be forwarded to the user upon uploading of the reports. The application will also maintain history of the lab reports.

2. Similarity Merger

The project is research cum development based. The idea is to investigate and implement various field matching functions proposed in literature. Identify the merits / demerits of the proposed functions and the situations or data types for which a certain function may be used. The application will compute the similarity between two records of a dataset by combining the similarities of the record fields. Afterwards, the records having similarity above a certain similarity threshold will be merged together. The application will then be tested for citation matching.

3. Algostration

The idea is to simulate some commonly used algorithms primarily in the field of data structures and operating systems. The project aims at improving the understanding about an algorithm. The user can give inputs to run an algorithm under different situations. The application will also be able to solve numerical regarding basic algorithm complexities, process scheduling, memory management etc.

Ideas by Mr. Salman Qamar

Project Idea 01 : Anonymous Social Network

We live two lives “one with our family and one with our friends” its old saying. With increasing use of Internet, Social networks, Instant messaging Apps the two lives are converted into Offline and Online.

If we analyze our activities we might discover that there is huge variance in our Life with our friends and family and with online friends. We might think twice while saying in real world but online where every activity is recorded we feel more freedom. But still our identity is a hurdle in expressing our real thinking.

Project Idea 02 : Virtual Deck

A multiplayer Card Game Engine.

There are many options like Court Piece (Locally Named "RUNG"), Get Away (Locally Named "THULAA") and others.

The Aim of this project is to build a Game Engine for Card Games. Designing an engine in which more games can be integrated at later stage.

Project Idea 03 : Paltooo – پالتو

A classified for pets.

With the time people especially pet lovers left using olx for buying and selling of pets. One of many reason is no profiling of buyer and seller. There were some alternate options like Dekho.pk and aasani.com.pk but both were acquired by olx. Now people are using facebook groups for this purpose. But the problem is that even the seller is unable to find its ad after a few days.

This project aims to create a classified site for pets with profiling of each user. It should able to sync ads posted in groups on facebook. This requires a little data processing.

As ads posted on facebook does not specify few thing with special tags like price, city, mobile no, and others. So for each synced ad you have to identify these thing intelligently.

Instead of direct messaging by posting mobile number publicly. Some other methods like chat should be provided.

Project Idea 04 : SMS Gateway

Developing sms gateway for sending sms messages. A web based and mobile application for sending text messages.

This can be used for sending bulk messages like holiday announcement in Schools.

School administration can send customized messages for each student for its grades.

More features can be added like birthday reminder, medicine reminder, school fee reminder and many others.

Can be provided via API for customized web-portals.
Developing multiple plugins to make it easy to use. Like WooComerce, Wordpress, WHMCS and many options can be added.

Project Idea 05 : Kids Learner

In few years back mothers have enough time for their childs. They use their spare time with kids for learning different things like, small surrahs (Surah Kausar), Different Kalma, poems, and many general knowledge questions. This requires multiple times repetition of same thing, and finally testing either child has learned or not.
Purpose of this app is to automate this process. Parent save poem, or question answer and child or even parent plays it. And finally testing. The testing phase is the tricky part.
As matching two different voices of same word or sentence is a challenging task.

Project Idea 06 : Local Instant Messaging App

Most of today's Instant Messaging (IM) Applications use Peer-to-Peer (P2P) technology.

One of many limitation is that if you delete video or file from your mobile then u are not able to retrieve it. (WhatsApp have this issue).

That is not the limitation of P2P as Bitcoin cannot risk to loss a single bit of data.

The idea is building an Instant Messaging App with some improved features like,

- Offline Mode Communication
- Nothing is Lost

Ideas by Mr. Waseem Ahmad

Hajj and Umrah Interactive Training Android Application

An interactive android application which trains Muslim's how to perform hajj and Umrah. Solutions in the form of simulations for specific type of queries related to Hajj and Umrah.

1. Adaptive Learning in social robots

Humans have the ability to do all types tasks even if he is not trained in any task because he can learn from its surroundings and can adapt himself to his environment. Humans can develop through learning. However robots have less ability to adapt from other agents or environment. A robot to acquire novel skills or adapt to its environment through learning algorithms. The embodiment of the robot, situated in a physical embedding, provides at the same time specific difficulties (e.g. high-dimensionality, real time constraints for collecting data and learning) and opportunities for guiding the learning process

Learning in robots can be achieved through different machine learning algorithms and techniques. Adaptive dynamical system modeled on the general feature of biological networks in robots. Through such type of learning skills robots can adapt themselves according to environment of humans and can learn to behave like humans. In this way robots try to get adjusted in our human world and can perform all types of our daily life tasks just like we do in replacement of ourselves.

2. Speech to Gesture and Gesture to Speech Recognition

Deaf people rely on sign language to express their own thoughts and feelings. It becomes the major communication barrier between the deaf and other people. However quite a few of trained translators are available. This is insufficient and inconvenient for helping the deaf express themselves.

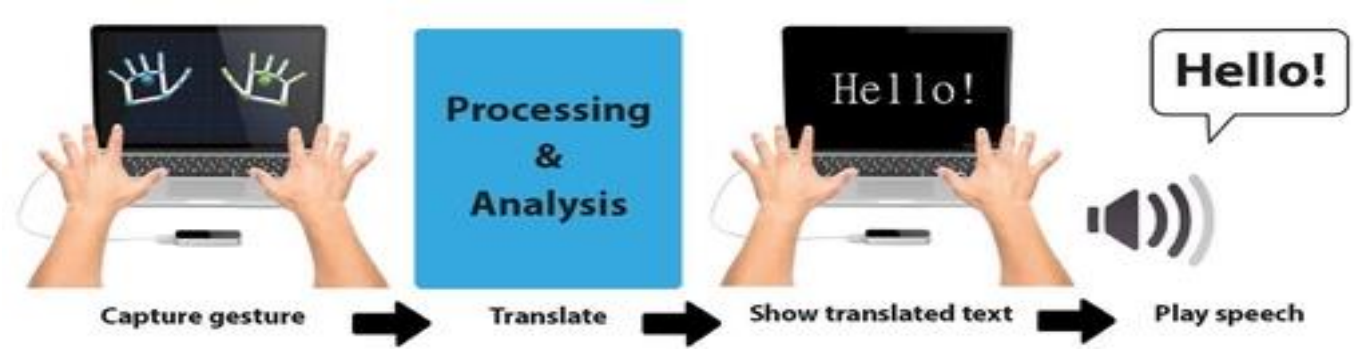
Leap Motion Controller

It tracks the movement of hands and fingers with very low latency, converting it into 3d input. It is going to be used for converting gestures into speech in real-time as a bridge of communication between the hearing impaired and ordinary people.

Objectives

- Recognize gestures done by the user
- Translate the sign language into speech and text in real time
- Visualize user's hands in real time

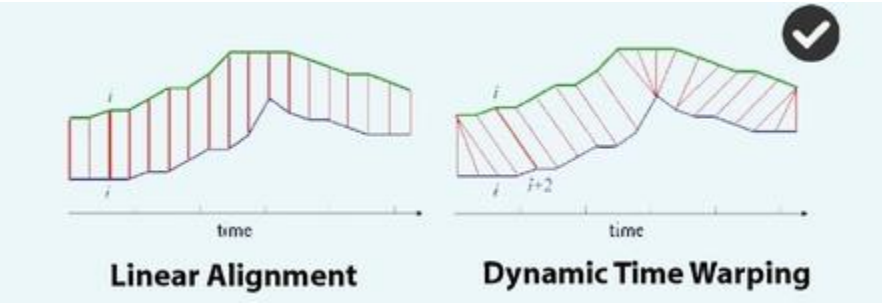
System Overview



A gesture performed with different duration. How can we identify?? ☹

Solution: Dynamic Time Warping

An algorithm for measuring similarity between two temporal sequences which may vary in speed or time. For instance, similarities in walking patterns could be detected using DTW, even if one person was walking faster than the other, or if there were accelerations and decelerations during the course of an observation



Visualizer

Visualizer shows the movement of user's hand to gives an instance feedback to users. Also gestures stored in database can be replayed such that users can learn gestures and adjust their hand movements

Visualizer in record mode

Visualizer in recognition mode

Performance

Accuracy	over 85%
Response time	within 2 Seconds

Conclusion

This project combines LMC with customized gesture recognition algorithm to translate sign language into speech and text. It is able to recognize gestures with high accuracy and low latency. This shows the possibility of communication between deaf people and hearing people efficiently with the aid of technology. We believe the communication barriers of human can will disappear in the future.

3. Coordinating multiple autonomous agents using Robot Operating System

Robot Operating System (ROS), ros.org, is an open-source software infrastructure for robotics that has had a profound effect over the field in the past few years. Currently used by tens of thousands of roboticists all over the world, ROS has given the field a common set of software on which to build applications and perform research. With over one thousand modules available, it is no longer necessary to write all of the low-level software for your robot before you can get to actually solving research problems. However, coordinating multiple autonomous agents is critical to many real world problems where agents interact with an unknown environment, each other, and human operators. For example, search and rescue missions require coordinating dozens of autonomous robots, as well as ensuring that the robots and humans work together. This project explores the science of coordination, particularly when each robot is fully autonomous.

Example projects:

- Programming autonomous navigation algorithms for individual robots
- Deriving "incentives" for robots coordination
- Testing coordination capabilities in simulation

4. Virtual Security Guard Cognitive Cam

Owing to the demand of more efficient and friendly human computer interactions, autonomous real time face detection and tracking is essential. Some of its applications include security, robotics, digital cameras, and games. Robots have few limitations to track the face properly while Human's attention and internal emotional state is directly related to his head and eye movements. If a robot is not able to correctly analyze these motions, it can never correctly interprets its human companion. Robots must be safe. They are not supposed to behave with

humans in the same way as they behave with other autonomous actors or nonliving things like obstacles. Lack of distinguishing ability among different faces creates unnaturalness, poor eye contact. As a result, robot seems unreliable.

Moreover human environment have a lot of challenging characteristics that are usually beyond the control of the robot's creator. So if robot cannot learn from people's gaze and movement, then security will be at risk.

Consequently humans tend to lose their trust in robots. For all these reasons, people are usually prohibited from being in a robot's workspace when it is in motion.

This project aims at taking a fundamental step to improve face detection and recognition in order to track the detected face by moving the web camera in the direction of face. We intend to use some functions in Matlab that together make up the Viola-Jones face detection algorithm and Arduino. Moreover to tackle with uncertain conditions, we can make robots more artificial intelligent by learning from people's gaze and action.

5. Virtual Class Representative (Announcement) Management System

Class representative plays intermediate role between classmates and teachers. The major duty is to inform and announce the updates. This project is basically an announcement system that specifically develop for CR to perform his duties efficiently and reliably.

6. SICSAR (Social Interaction Characteristics for Socially Accepted Robots)

The SICSAR project proposes that to collaborate with humans, robots need to be almost "perfect" - faultless - in their actions. Humans are certainly not perfect agents, and, to achieve common goals during interactions, mutually correct their behaviors to increase their possibilities of success. This project aims at taking a fundamental step in this direction: developing robots able to coordinate their behaviors with those of their human partners. The project tackles this issue through a highly interdisciplinary approach, integrating HRI (Human Robot Interaction) with experimental psychology, robotics and robot design research. It intends to develop (simulation based) software solutions for iCub - one of the most sophisticated European robots – with a new ability: competently correlating and synchronizing its interactive movements.

7. I.MOVE.U (Intention-from-movement understanding: From moving Robotic bodies to interacting minds)

I.MOVE.U aims to provide the comprehensive justification of how intentions are extracted from body motion during interaction with conspecifics. Covert mental states such as intentions become visible to the extent they contribute as dynamic factors to generate the kinematics of a given action. By combining advanced methods in psychophysics and neuroscience with kinematics and virtual reality technologies, this project will study

i) To what extent observers are sensitive to intention information conveyed by body movements.

ii) What mechanisms and neural processes mediate the ability to extract intention from body motion?

iii) How, during on-line social interaction with another agent, agents use their own actions to predict the partner's intention.

These issues will be addressed at different levels of analysis (motor, cognitive, neural) in participants with autism spectrum disorders. The final outcome of the project will result in a new quantitative methodology to investigate the decoding of intention during interaction with conspecifics.

8. ATTEND (Characterizing and Improving Brain Mechanisms of Attention in Humanoid Robot)

Human individuals spend most of their time in social settings and in cluttered environments made up of a multitude of other individuals and objects in different locations. Out of this overwhelming sensory input our brain must select which information to use to guide action and thought. The mechanisms by which our brain does this are collectively known as "selective attention". Such mechanisms are used routinely, and when impaired they can have debilitating effects for individual human performance and may impact human functioning in social communities more generally. Selection is thought to involve the activation of relevant information and the inhibition of irrelevant information. Given the critical importance of selective attention in everyday life for guiding our perceptions, actions, thoughts and memories, characterizing the brain mechanisms of attention is a major goal in mind/brain sciences. Understanding brain mechanisms for attention also has numerous

applications, especially with regard to disorders of attention. In this project, we aim to make significant progress in the study of attention by:

(a) Creating a parsimonious model of the neural mechanisms of attention
(b) Improving our ability to measure attention effects in the brain
(c) Extending our understanding of attention in single brains to the important social phenomenon of shared attention
(d) Using this knowledge to develop new rehabilitation and training methods for clinical and non-clinical populations
(e) Developing a new method to detect patterns of release of attention-related neurotransmitters in the brain.
The overall aim is to build on the currently separate groups with specialization in mind/brain sciences in Trento Province by bringing these groups together to build a strong, interdisciplinary team working together on basic and applied research in attention that will have a large impact on the social.

9. Implementation of Meta-Hacking to Prevent a Programmer from Freelancing Frauds

Meta-Hacking can be used to prevent a programmer from freelancing frauds. In this a program or library will be fed into a project which is made by freelancer. That program will be activated if freelancer is not paid for project on basis of rules defined in program. For further details just send me email wasimahmad.ucit@gmail.com.

10. Simulation of Top-down attention mechanism using SMART BODY (tool of virtual reality)

SmartBody is a character animation platform that provides locomotion, steering, object manipulation, lip syncing, gazing, nonverbal behavior and retargeting in real time. SmartBody is written in C++ and can be incorporated into most game and simulation engines. SmartBody is a Behavioral Markup Language (BML) realization engine that transforms BML behavior descriptions into realtime animations. SmartBody runs on Windows, Linux, OSx as well as the iPhone and Android devices. It can be programmed to regulate top down attention. It can be used to demonstrate how top down attention mechanism works.

11. Quantum Signal Processing for Soft Medication

Quantum signal processing (QSP) that is aimed at developing new or modifying existing signal processing algorithms by borrowing from the principles of quantum mechanics and some of its interesting axioms and constraints. Consequently, in developing the QSP framework we are free to impose quantum mechanical constraints that we find useful and to avoid those that are not. This framework provides a unifying conceptual structure to process signals of human brain in stabilized state and in unstabilized sate. QSP framework will generate signals based on unstabilize signal to transmit into human brain which will work as a soft medication. This will help in stabilizing human brain state.

12. Cognitive network configuration using holographic telepresence

Holography provides the scheme to customize network configuration with ease according to the sensitivity and ad-hocness of the ongoing scenario by just rearranging the photonic pattern or by photonic parameters configuration and channelizing photons in different ways.

In this project data detection and verification module will sense the incoming/outgoing data, authenticate the data stream, process the data, acquire the configuration changes accordingly, learns the changes in inward/outward stream behavior and configuration setting, displays data in digital format and also forwards it to the digital to hologram conversion module. The purpose of this module is to sense the data, authenticate it, configure the changes accordingly and learning the behavior of data stream and effects of configuration modification.

Digital to hologram conversion module will receive the digital data, transformed it into the holograms and sends it towards holographic interface. In this module the received holograms will be displayed to the users where they can see, modify and save the changes in the ongoing scenario. This module is directly connected to holographic storage where each episode will be stored and will be able to accumulate these episodes as successful or erroneous story. These episodes will be retrieved at any later stage if required. After this holographic data will be transferred towards the hologram to digital conversion module. In this module the holographic data will be digitized and forwarded to the evolution identifier module where this module will be able to identify the evolution on the basis of specific processes. Now the parameters obtained from this module will be classify as structural variations or configuration modifications and then it will be transmitted to the evolvable memory module.

Ideas by Mr. Ahmed Ashraf Butt

1. **Title of Project's Idea: HashTag analytics website**

Abstract of Project Idea :

Companies often need to confirm that how well their campaign goes by parsing social media data and get reports based on the data. We will get data from different social media websites based on hashtag and then process data and provide reports to our client. This is commercial idea and if we are able to make this idea worakable then we can get seed investment for this idea and launch it on large scale.

Any special guidelines/instructions for project idea:

You must be good in web service and also good in handling big data.

2. Title of Project's Idea: Camera Application with new filter.

Abstract of Project Idea :

Today Camera application is very trending. The idea is to implement new filters for the application or alteast try to give all image filter in the same application. This is research based idea and we need to learn all mathematics of current filter and tweak them to create a new filter which could be viral to the android application.

Any special guidelines/instructions for project idea:

You must be good in java and android applicaton. You must be eager to do read lot of research for this work.

Ideas by Ms. Shaista Habib

Online report card

Develop an application for teachers to enter test marks and comment on them. Specific password will be given to the parents. Parents can check performance of their children on daily bases and change status of their children's report from "not viewed" to "viewed". If any parent not viewed any specific day status, then a SMS will be send from website to registered mobile number to remind them about daily report, also it keeps record of that sms. Parents can schedule meeting with teachers using this application.

Application for diagnosing type of fever

This application takes test results of prescribed tests and patient's symptoms and judge type of fever. This application will assist diagnostic process.

Personalized medicine-reminder app.

With a wealth of tests and medications to treat many conditions. But remembering to take medication or perform a test regularly, consistently, and at specific times can be difficult for elderly people with short-term memory loss, or teenagers absorbed in activities. With mobile devices becoming our constant companions. In this project, you will build a *medicine-reminder app* that employs a phone or tablet to remind its user to take action.

Note: Further extensions can be made while working on these projects.