Meetings and Recent Activities

Technical Activities -

MLH Local Hack Day

From David Fincher movies to the pages of the New York Times, Hackathons have proliferated into the mainstream culture and taken the world by storm. Gone are the days when hackathons were reserved for a niche audience. Today, the hackathon culture is exploding and giving many young enthusiastic minds the platform to showcase their technical skills and talents by building something innovative and providing out-of-the-box, breakthrough solutions and innovations.
The MLH Local Hack Day organized at Symbiosis Institute of Computer Studies and Research on the 1st of December 2018 and sponsored by Microsoft and Github was one such attempt to ignite young minds and bring forth their creativity and talent by motivating them to produce effective and innovative solutions to common problems or just build something entirely new!

The 12 hour Hackathon started with a welcome speech by the esteemed Director of Deutch Bank, Mr. Suswar Ganu, who highlighted the importance Stress Coding as a catalyst to bring out the best in students and teach them the important values of time and stress management. Mr. Suswar Ganu cited various examples to prove the fact that hackathons have indeed proven to be the incubation ground for a large number of successful and remarkable innovations.

The second Guest of Honor, Dr. Bhushan Garware, Technical Specialist of Persistent Systems, emphasized on the various aspects of Machine Learning and Data Science and encouraged the participants to work on the same.

The highly motivating and charged opening ceremony was followed by two very interesting and informative seminars, the first one aiming to provide an insight into the working of Alexa, Amazon’s Voice UI Assistant and the second focusing on No Code App Building with Mendix. The eager, energetic and enthusiastic participants thoroughly enjoyed the seminars post which the actual Hackathon began!

For the next 8 hours, the participating teams racked their brains and churned their minds for ideas, totally engrossed and giving their all, to build something creative and interesting. It was a tense 8 hours for all participants and neither sleep nor hunger could dampen their spirits as they coded away hour after hour. The teams had some interesting projects lined up, some of which included, a translation app, a sudoku master game, a cryptocurrency and forecast application as well as a chat application that would run without internet.

As the clock struck 8 and the deadline closed in, the teams rushed to give their projects the final touches and the excitement soared anew. The big moment had come!

The Guest of Honor for the evening, Mr.Prasad Shirgaokar talked extensively about the inner workings of the software industry, providing valuable insights into the various criteria that the young developers and programmers should keep in mind in order to be successful. This was followed by the actual evaluation of the projects, with different teams giving demos of their projects. Undoubtedly, a very tense moment that all teams had been desperately waiting for, as it marked the culmination of their day long efforts.

The judges for the event including Mr.Satish Patil, Mr.Arun Nair, Mr. Aditya Godbole and Mr.Nikhil Vije were extremely eager to see what the various teams had developed. They had a hard time evaluating the projects because given the tough competition, picking the top three hacks definitely didn’t come easy. However, after much deliberation and discussion the results were finally decided!

Among the featured projects was a whiteboard room that allowed any number of people to connect and solve a problem in real time, developed by Nikhil, Ayush and Rohit from DY Patil University, Akrudi, a college schedule and time table management app built by Siddharth Verma, a 3rd year student from SICSR, and a third project, also by a team from SICSR, consisting of Kishan and Mrunali, who worked on a Youtube-like video gallery created using Java. The consolation prize was handed out to a team of 1st year students, Tejal and Kushan for their project based on providing database connectivity with Amazon Alexa.

Overall, the event turned out to be a major success, as all the participants walked home with new skills, new memories, new experiences and a new found motivation to explore more, to be more curious and to keep pushing their boundaries in life. Also, not to forget the Amazing Swags, kindly provided by our sponsors, Microsoft and Github!
IBM Interaction

SICSR had the privilege to experience the presence of dignitaries from IBM on its dais to address MSc(CA) students regarding contemporary technologies such as blockchain, security of identity, etc. The session proved to be highly informative as some of our dissertation projects have also been picked up from ideas which the speakers mentioned.
DellEMC Interaction

SICSR had invited renowned dignitaries from DellEMC, Pune who gave insights on their current working storage systems. The interactive session conducted proved to be highly informative for all the students.

Google Applied CS with Android Workshop

This workshop was conducted by the on-campus Google Applied CS Facilitator, who also invited a Google Certified “Associate Android Developer”, Deven Joshi. The students had an opportunity to not only hear but also understand the advancement of Mobile Development and different initiatives undertaken by Google to encourage people in the IT sector. The workshop focused on turning Computer Science theory into practice by covering the basics of Android Application Development. The Students were informed of achievable opportunities and certifications pertaining to Android, as well. The students also had a chance to learn and implement a data structure in an Android App. At the end of the workshop, the students had built their very own app, having implemented the recently taught data structure. In learning and understanding a new technology, there is no better alternative to hands-on training sessions.
The workshop provided just that and left students with good understanding of what they just learned.

**Start:** 18-Dec-17  
**End:** 19-Dec-17

**Workshop on Security**  
With the rapid moment of technology and its use in the day to day activities, we are left with a suspicion of fact that someone is spying on our activities and led to the beginning of significance for privacy. The days passed and a major problem of tackling such issues raised, which led to the wide opening of opportunities in the domain of security.

Mr. Rahul Gale started with the basics of information security and gave a clear-cut view on what information security encapsulates and interacted on how one can contribute to it and thereby changing the perception towards security.

Mr. Hemanth Dusane started with the very reason why security is needed and explained about different Information Sharing Resource mechanisms with the aid of interesting videos.
Community Activities -

Hour of Code 2018

Computer Science is being an imperative field to learn in this modern age. A group of MSc (CA) students from Symbiosis Institute of Computer Studies and Research (SICSR) took the initiative to visit schools in Pune to teach a bunch of school kids a few topics about computers. On 6th December, 2018 (Thursday) a few students visited K Tech School, Kondhwa, Pune and taught Std. 9th students about computer related concepts like Topology and Data Structures with engaging activities. The school kids were divided in groups and made to stand in a circle with one student among the group to stand in the middle. A blank sheet, pen were distributed and a simple category was given to each group and the students were asked to write the name of another student in the group and a name from the category (example a name of any fruit or vegetable). The students were made to pass it to the person in the centre and deliver the paper to respective individual. Message passing in networks and IP Addressing was taught using this activity. The similar activity was conducted the following day in Kilbil School, Gokhalenagar,
Pune. The response was positive from the school kids and the objective of this initiative was to get school kids to be interested in computer science and explain computer concepts in an interesting manner.

List of Activities:

a. **Linear Search**: In this game, we told students to form one big circle, then we distributed cards, then one student was card and that student searches for the given card in the circle, if finds the card then hit or else miss. Meaning of hit means linear search successful or else not. After that we explained the concept of linear search.

b. **Sock Wars**: The students were divided in two groups. From one group, one student come forwards and throws the socks pointing to the opposite team member and likewise both team get chances and the team wins who has more number of members. As the students were pointing to each other we explained the concept of pointers pointing address in memory.

c. **Array Concept**: In this activity we were teaching array concepts and fragmentation to the school students that how array works with help of sorting and searching algorithms. To do sorting we formed a queue of students of random heights then explained to students that how to sort the queue height wise in ascending order step by step.

d. **Fragmentation**: In this activity a queue of students and considered as each student a process and after some time the alternate students standing in queue will step out from queue. Then this will make a gap between students standing in queue, like wise in RAM when process move out from memory it create a whole in RAM. Then we will do fragmentation i.e. free memory one side and used memory another side.

e. **Pass the Parcel**: Under this activity, the students were divided into six groups each of them having a volunteer to guide and a topic given. Based on the topic, students were instructed to pass a piece of paper having the name of the intended student and a message with a twist of having a common student passing the paper from the particular student to the intended student. This is a simple and fun activity which explains the concept of Star Topology. The activity was repeated again with the students forming a circle explaining Ring Topology and then forming a line explaining Bus Topology.

f. **Kho-Kho**: Under this activity, the students were divided into two groups for the game. This particular activity was enjoyed by all. Through this the concept of Linked list was explained wherein the students catching the person are nodes trying to find the data.

g. **Cryptography**: Under this activity, Students were asked to un-jumble the letters/words and also few students were supposed to encrypt the particular word in the form of ASCII and remaining students decrypted them.

h. **Algorithm**: The activity was carried out in the form of a competition amongst the students where two pairs performed against one another and the pair who was able to finish the activity successfully and faster than the other was declared as the winner. There were total 6 rounds which means 24 students out of the total 40 students participated, after every round the winning pair was awarded by a pen each.
Hour of Code 2016

On 7th December 2016, at Pune Police Public School: The aim of this event was to teach students from different grades and age groups computation without using computers. The sessions involved activities such as Role Play, Pictionary, Treasure Hunt and many more. In response to this activity, the students were very happy and gratified.

On 9th December, 2016 at Symbiosis School, Prabhat Road: Similar set of activities were organized for the students of the aforementioned school and the experiences from the previous day helped us in making this event a bigger success.
On-field activities in action

ACM members helping participants to get through the hurdles!

Start: 07-Dec-2016
End: 09-Dec-2016
Hour of Code 2017

With the advent of information age in the era we live in, every part of our daily lives is penetrated by technology in some way or the other way. It is not only limited to PCs or smartphones; there is much more in the space. Everything that we are enjoying today is possible because of the advancements in Computer Science.

Students with young minds are the doors to advancement of the information age. The Hour of Code is a global movement designed to generate excitement in young people by introducing them to Computer Science in some fun and innovative ways. Designed to demystify “code”, young minds are shown that anybody can learn the basics and that anybody can participate and contribute to the field of Computer Science. It has since become a worldwide effort to celebrate Computer Science, starting with 1-hour activities but then expanding to all sorts of community efforts. Hour of Code is conducted globally every year during the Computer Science week.

The primary goal that was kept as the base during the planning phase was to teach the students of 7th, 8th and 9th grade about the many wonders of computing, in a fun and thought-provoking way. It is always a challenging task to keep young minds focused on anything for too long. This is something we realize, which is why, under the guidance of Dr. Tejaswini Apte, we came up with some interactive games which relate directly to concepts of Computer Science.

The activities mainly focused on building problem-solving skills, logic and creativity of students in ways they understand better. The activities were designed in a way to elaborate the innate concepts of Computer Science while enabling a prolonged hand over the attention of the students. The activities that were conducted are:

- **Divide and Conquer** – the objective was to make them understand algorithms.
- **Building a Pyramid** – to demonstrate relationship between user and computer machine (communication)
- **Selection Sort and Binary Search** - the objective was to make them understand the importance of Sorting and Searching and how it used by everyone in daily life.
- **Guess the Technology** – the objective was to acquaint them with some technical vocabulary.
- **Treasure Hunt** – the objective was to demonstrate Teamwork, exercise the body and mind, improve problem-solving as well as logical skills.
- **Double Ring** - children were given brief information about networks and how they work. Then, with a double ring, they were made to understand how message and packet passing is done in an actual computer network.
- **Robot Friend** - this was a blindfold game which was focused in teaching the children about the working of Robots and Artificial Intelligence.
- **Chain Game** - Neural Networks is an emerging field in the technical world. These children being the future, should be aware of that. In the chain game, they were made to catch people and the people caught were added to the chain of people who resume catching. As more and more people were getting caught, the chain kept increasing in length. This is how they were explained the simple concept of Neural Networks.
- **Kabaddi** - by leveraging on the rules and semantics of Kabaddi, students were taught the basic working of common data structures such as Stack and Queue.
- **Musical Chair** - through this game, the First Come First Serve scenario in computers was subtly explained to the children. This turned out to be a physically tasking game as participants were tested on their stamina. But, in the end, they ended up learning a very primitive concept of Computer Science.
Kho-Kho – another physically challenging game, the students had a fun time playing this game. Through the game, they were made to understand the concept of Shortest Job First in CPU Scheduling. Not surprisingly, the students knew much of the concepts and were easily able to comprehend that in Computers, it is not only a single parameter which helps to decide the order of execution.

Through the feedbacks of the children and their apparent enthusiasm, we were able to conclude that the Hour of Code was a success. Quite a lot of enthusiastic and curious students came to the volunteers to clear the questions in their mind one-to-one. The indoor and outdoor activities were conducted in a well synchronized manner, like in Computers. There was a lot of learning and spreading of awareness with respect to technology. More of such activities are planned for the near future.
Participation in ACM India Activities -

ACM Compute 2018, Punjab

Two of the SICSR’s MSc students were blessed with the opportunity to attend ACM Compute Conference and Meet for the year 2018, held at the beautiful and enormous campus of Chitkara University, Rajpura. The whole theme of the conference focused on how the Indian Education scenario can be improved upon in the Computer Science field. The audience at the conference had the privilege to hear a talk on ‘Computing for Better Bharat’, a platform where participants had the chance to submit innovative and revolutionary research ideas in fields of Healthcare, Indian Language studies, etc. There were participants from all corners of the country to present their Research Posters.

ACM Chapter Summit, a sub-part of the ACM Compute Conference, gave all the Student/Professional chapters a platform to discuss their contributions to ACM activities and talk about their future plans. The chapters had a chance to network with each other and help each other in any shortcomings. All chapters shared ideas and reflected upon them as to how they can improve their contributions to the ACM community. The SICSR’s students also got the opportunity to attend workshops on Block-chain and Internet of Things technology. This experience was not only exciting and enjoyable, but also very insightful for the students.
In December 2016, SICSR ACM Student Chapter is shortlisted to attend the Grace Hopper Celebration India in 7\textsuperscript{th} to 9\textsuperscript{th} December 2016.
Of the three days of conference the first day marked the inauguration ceremony at The White Orchid Convention Center. The convention center experienced the presence of almost 5 thousand enthusiastic attendees who were addressed by the Managing Director of The Anita Borg Institute, GeethaKannan. With her enlightening speech the entire crowd was curious about what was going to happen for the next two days. The second day of conference was held at Vivanta by Taj and comprised of the technical presentations, panel discussions and lightening talks on trending computing technologies, especially open source software. The students had the opportunity to network with delegates from various companies and actually discuss various problem statements and market’s view about technology. The last day of the conference was entitled for management related activities.
Start: 07-Dec-2016
End: 09-Dec-2016
ACM Compute 2017, Bhopal

Under the ACM Community, four SICSR students were given the privilege to attend ACM’s 10th Annual Conference which was conducted at the humongous campus of Sagar Institute of Research & Technology, Bhopal. This annual conference was mainly focused on Artificial Intelligence (Current & Future Impact). The conference covered topics like Deep Machine Learning, Blockchain, AI & Legal Practices and AI & Education. Professors, Industrialists and Students presented various papers, posters and also participated in competitions which gave away awards like “Best Paper” and “Best Poster”.

On the first day, there was a meeting between representatives of the ACM Student Chapter from many institutes. For the SICSR attendees, it turned out to be a good session as they were able to share their chapter’s future plans while mentioning what activities their ancestors carried out under the Student Chapter. With that done, they also got an opportunity to listen to how and what kind of activities other institutes carry out under the Student Chapter.

Moreover, the students of SICSR were pampered by the hospitality showcased by the staff and students of Sagar Institute of Research and Technology. Students also interacted with some personalities from the computing world, exchanging thoughts and ideas while gaining a lot of valuable advice. This event was very beneficial to the students of SICSR as it gave them a larger picture of the computing industry.
CODS-COMAD 2017

Eight students of our Post-Graduate programme Msc(CA) are invited on the basis of their statement of purpose to attend CODS-COMAD Conference 2017 held in Chennai. Sample Certificate of Participation is attached.
Two students from SICSR ACM Community were fortunate be selected on the basis of their Statement of purpose to attend this conference. The conference was conducted over a span of three consecutive day, and was attending by scholars from the field of Data Management and Data Science such as Surajit Chaudhury, Distinguished Scientist, Microsoft and Anima Anandkumar. Principal Scientist at Amazon Web Services They spoke about their research papers and the road blocks they are facing under Industrial Track .Students from IIT Bombay ,Delhi also had the privileged to present their research paper under Research tracks . This event gave us an insight on how the industry functions and was beneficial for the students of SICSR.
Community Service -

Women's Day Celebration

Under the umbrella of ACM Student Chapter Pune, the students of SICSR organized an event on the occasion of International Women’s Day. The entire teaching, non-teaching and administrative staff, along with the students of MSc(CA) were warmly welcomed where they
shared the stories of their women inspirations who helped prosper their lives. This was followed by them sharing their own experiences and cake-cutting.

**Start**: 08-Mar-2017  
**End**: 08-Mar-2017

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**Senior Citizen Interaction with Technology**

Under the umbrella of ACM student chapter, the students of SICS R organized an interactive session with senior citizens to explain the niche areas of technology for their ease. The objectives are to explain computer network, usage of computer network to provide help for routine transactions and communication, which may include financial transactions, social media and handy services like cab booking, online shopping and security. Through this initiative, the students aided in digitally equipping senior citizens in this new age and help them feel empowered in their daily lives - whether it is independently requesting for an Ola Cab, receiving and sending emails using Gmail, communicating via WhatsApp, making online transactions using Paytm or making basic security settings in their mobile phones.
Placement Activities

System Programming Workshop

This workshop was conducted by Mr Abhijat Vichare from Persistence. This workshop is an attempt to introduce and familiarise the basics of systems programming to the beginners, and to build confidence among students to take up project in this area. The participant will develop a deep understanding of Linux or Unix systems and learn concepts and skills which are essential for programming and software development on Linux-based platforms for both products and/or applications. The workshop was a success in which the students tried manipulating GDT using C language.
Other Activities -

Handover Ceremony 2018

SICSR’s ACM Student Chapter Handover Ceremony is an event held every year, where the activities conducted by the previous year’s Office Bearers are commended and the responsibility of handling the further activities is handed over to, current year’s, new students. Like the previous year, even this year, we were blessed to have the presence of Mr. Abhijat Vichare. He enlightened all the students about what ACM is as an organization, by taking a real-world example of how Computer Graphics are used in Movies and where professional bodies, like ACM, play a part in such process. He not only encouraged us to become a better professional but also explained the real meaning behind the word ‘Professional’. Following this session, by Mr. Abhijat Vichare, was the Handover Ceremony which left the audience excited and more to expect from the upcoming year.
**Handover Ceremony 2017**

SICSR organized a Handover Ceremony where the office bearers of the previous academic year promptly handed over their roles and responsibilities to the new and eager office bearers. Coincidentally, the date of the ceremony was the same date the ACM community turned 70. On this special occasion, students of SICSR were blessed to be in presence of Dr. Abhijat Vichare, who not only enlightened the students on the topic of Algorithms but also, through brainstorming, helped us come up with our own solutions for the traffic problems in Pune city. This activity proved to highly thought provoking and cognitive. The Handover Ceremony, which followed the session of Mr. Vichare turned out to be a rather intriguing one as the smooth transition was eagerly witnessed by the attendance.