

Report on list of Events & Activities offered by the Dept of Electronics & Communication Engineering through Centre of Excellence & IoT Infrastructure and Solutions Lab for the Academic Year 2019-20

Prepared by: Prof Sufian Kaki Aslam

Date: July 01, 2020

Embedded Systems Training Program

This program is to build the students' expertise in Embedded Systems (Hardware + Firmware)!

Based on the Industry requirements for Embedded/IoT Engineers, who can develop products right from the ideation till the prototyping stage, Atria's IoT CoE with ARM University Program developed this training program. It is meant to equip the students with all the necessary techniques, tools and resources to build your own Commercially Viable Product!

In this program, students shall learn:

1. ARM - Architecture + Embedded Programming + Peripheral Interfacing
2. Firmware Development using Keil
3. Complex Embedded Concepts - Memory Management, Clock Configuration, Interrupts, etc.
4. Real Time Operating Systems
5. Designing & Documenting of your projects using Fritzing
6. PCB Design + Fabrication + Soldering
7. Internet of Things - Devices + Network + Security
8. Tools to develop IoT Applications
9. Profile building and Approach to apply for Intern/Jobs

Trainer: Prof. Sufian Kaki Aslam, Associate Professor of Practice – IoT Infrastructure & Solutions Lab, Atria Institute of Technology

Start Date: 08 July 2019

Location: IoT Centre of Excellence / Atria IoT Labs

Duration: 2 months

Students List:

S. No	Name	USN	S. No	Name	USN
1	Ajay A	1AT16EC005	10	Payel Masanta	1AT17EC078
2	Aditya R Dharamshi	1AT16EC004	11	Prajwal C Gowda	1AT17EC083
3	Bhavan S Halkeri	1AT16EC034	12	Sajith.s	1AT17EC103
4	Deekshith P	1AT16EC041	13	Sneha sb	1AT17EC113
5	Dinakaran P	1AT16EC045	14	Sujay G H	1AT17EC120
6	Gunashree S.	1AT16EC050	15	Supreeth B K	1AT17EC122
7	Mithun S	1AT17EC062	16	Swarna V	1AT17EC124
8	Nishanth C R	1AT17EC071	17	Yukta TN	1AT17EC142
9	Nishitha palan	1AT17EC072	18	NANDAN KUMAR N	1AT17EC066

Internship at IoT Centre of Excellence

Call for Internship

I hope you did your exams well! Many of you might be searching for internships during this break and since recently at the IoT Center of Excellence in the campus, we have been getting a number of projects from the industry, we are offering internship to a limited number of students. This will also involve a fair amount of training and practice, but you are also expected to self-learn and be responsible to build a functional prototype of the idea you (team) are assigned to.

We are looking forward to start this at the earliest (Monday 08 July, if all goes well) and this shall carry on for 4-5 weeks on all weekdays (Mon-Fri), 9.30am-5pm in one of the labs on campus. You do not have to pay any fee for this internship, and neither should you expect any stipend. All the expenses related to the project and learning will be taken care by the institution and you shall get the certificate of Internship after completion of the internship. We prefer the students who are going to 7th Semester, but its not a restriction. Also, students from any branch can apply.

Most of the ideas and projects are based on Embedded Systems, IoT and Programming. If you find this interesting, please submit your details here

Start Date: 12 July 2019

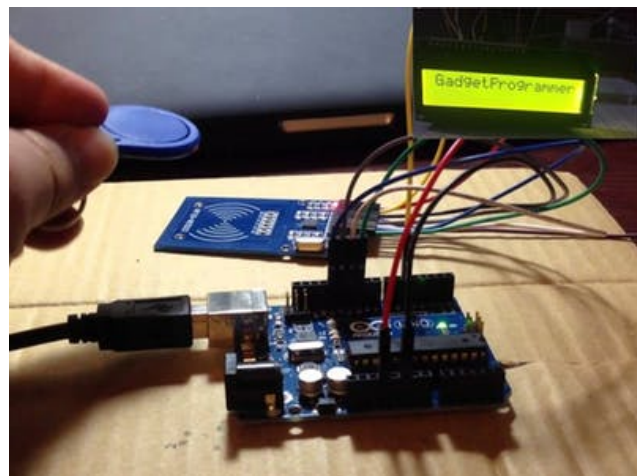
Location: IoT Centre of Excellence / Atria IoT Labs

Duration: 4-6 weeks

No of Students: 13

List of Projects:

1. [Campus Management System - Course Allocation, Attendance & Grading Modules](#)
2. [RFID Based Student Tracker and Event Management System](#)
3. [ACC-Event - Event Management System](#)
4. [Home Automation and power monitoring system using IoT](#)
5. [Development and demonstration of LoRa communication, based on Arduino Uno and NodeMCU](#)
6. [Development of Centralized Access Control System using Fingerprint biometric method](#)



Participation in India Innovation Challenge Design Contest

Texas Instruments in collaboration with Department of Science and Technology (DST), powered by AICTE mission organizes India Innovation Challenge Design Contest every year. The contest is open for all Indian engineering students pursuing undergraduate, postgraduate & Doctoral degrees with Indian engineering colleges.

During IICDC 2019, Atria IoT Labs facilitated over 30 student teams to participate in this contest. As an appreciation to his effort, Prof. Sufian Kaki Aslam was awarded a membership to the Confederation of Elite Academicians of IICDC. **College SPOC:** Prof Sufian Kaki Aslam

Date: 30 Sep 2019

Duration: 6 months

Projects List:

1. Smart Waste Management
2. Using IoT to monitor the gym exercise involved in bodybuilding
3. Digital Walking stick
4. EMPLOYEE TRACKING SYSTEM WITH RFID
5. DUSTTECH : smart dustbin, ML based dustbin work on the based of Image processing and collect the recognised garbage
6. Criminal psychology analysis using Machine Learning
7. Virtual Farming IoT Environment for Farmers
8. Farming Robot
9. Fire fighting ROBOT. It detects fire and blows off using water pump. Sends message to near by fire station and head of authority in case of college. Detection is notified by buzzer sound
10. A low cost near human prosthetic Arm
11. Estimation of the Vehicles Speed in Monocular Traffic Videos.
12. Smart Navigation "Anywhere Any Time"
13. Use your Knowledge on education to Win big only on education Wars. A Platform (App & Website) which allows you to take up & contest in tests of your domain
14. AI IOT BOT
15. A bin that segregates waste automatically (RO - BIN)
16. Gesture controlled rescue rover
17. Smart refrigerator
18. My idea is to mind my own business

19. Helmet as a mandatory key for Bike!!
20. Crop protection from rainstorm
21. Virtual Artificial IoT Environment for Farming
22. Virtual IoT Environment for Farming
23. Smart mobile back cover to charge the phone using solar energy
24. Our Idea is to prevent accidents occurring on the roads due to high speed of vehicles and traffic problems, using : A Typical Method To Avoid Vehicle Collision at the Junction Road Using IoT
25. Solar Fuel Station
26. Farm in arms :- Direct connection between farmers and consumers through a single link.
27. SECURE SMART DESK
28. Automatic vehicle accident detection & messaging system
29. Medicine doze reminders
30. Most of colleges of India doesn't have the sports facility and sports programs so my idea is that if the colleges have 8-10 hours they should give at least 1 hour time to practice for their sports eve
31. Plastic bags or waste plastic into rods
32. Traffic control system to facilitate an ambulance
33. A reliable Fuel Gauge
34. Personal assistant as a service
35. Portable Tree
36. Automatic Remote Health Monitoring Machine with Medicine Dispenser(AHMD)
37. Instead of relying on conventionl sonic/infrared sensors to validate available parking spaces we use a Image recognition based module paired with an app to update and manage parking and monitize it.
38. Borewell water quality and motor monitoring based on IoT gateway
39. Speech enhancement
40. Smart meter using lora
41. Automated ticket system for BMTC buses
42. Emergency rescue system using LoRa and GSM

43. The idea for our product is to create a simple yet effective tracker that helps you locate your goods if stolen while also saving on power. Our main goal with this product is to help track stolen good
44. Wireless Charger for any distant battery operated device
45. To Build a smart-agriculture module that using TI components will provide real-time analysis and predictive assistance to the farmer.
46. Decentralised access control and tracking system for vehicle using open source tools
47. Smart power management system using modbus protocol
48. BLE beacon based attendance system
49. PaRAMa- Paper Recycling Automated Machine
50. Anti braking system with human interface
51. Smart sewage system , we have seen a lot of problems due to unmanaged sewage and drainage system, the whole area floods up in hours putting life at stake ,so my current idea is SMART DRAINAGE
52. Anonymous and distributed voting system
53. USER-BASED CUSTOMIZABLE SMARTPHONE
54. Offline Navigation:Global Positioning System(GPS) based location assisting system especially for impaired people
55. Rain water conservation where we renovate the house in such a way that the house doesn't look messy and in at the same time harvest the rainwater for our requirements

Pictures



Google Cloud Career Readiness Program

The career readiness program offered by Google Cloud provides students of all backgrounds the chance to achieve industry-recognized credentials. Whether in business, engineering, science, or more, cloud skills are a differentiator that can help you stand out in your chosen field.

Being a host institution of this program, facilitated by the Atria IoT Labs, 80 students have been enrolled into this program during the academic year 2019-20. As part of this program, all the enrolled students along with the faculty co-ordinator undergo a 5 course Coursera specialization on Articheting with Google Compute Engine sponsored by Google Cloud and further subsidized certification exam of Associate Cloud Engineer.

Faculty Co-ordinator: Prof Sufian Kaki Aslam

Start Date: 04 Nov 2019

Duration: 4 months

Students List:

S No	Name	USN	S No	Name	USN
1	John Karamchand	1AT16CS041	41	Abhinandan V	1AT16IS003
2	Surya Murugan	1AT16CS111	42	Hitayshi P Makadia	1AT16IS044
3	Nitin Ravichander	1AT17CS047	43	Mayank Anuragi	1AT17IS046
4	Adil Sabir Azeez	1AT17CS001	44	Rakshit Ramnathnaik	1AT17IS054
5	Anjali Kumari	1AT17CS006	45	Neha Prakash	1AT17IS057
6	Poornima B J	1AT17CS014	46	Owais Ahmed	1AT17IS059
7	Chandana Kp	1AT17CS018	47	Anagha J A	1AT18IS007
8	Menaka G	1AT17CS020	48	Anand Shankar	1AT18IS008
9	Harshitha R	1AT17CS023	49	Aruna.S	1AT18IS012
10	Kim Vats	1AT17CS031	50	Belinda Benjamin	1AT18IS016
11	Nikhil Singh	1AT17CS042	51	Mahaveer singh	1AT18IS047
12	Pramod B N	1AT17CS054	52	Mahendra R	1AT18IS048
13	Ranjani R	1AT17CS062	53	Michelle Maria Thomas	1AT18IS052
14	Savitha	1AT17CS076	54	Nishita G Nair	1AT18IS059
15	Spoorthi P	1AT17CS087	55	Preran Mkyasvar	1AT18IS065
16	Syeda Fathima Zohra	1AT17CS091	56	Sahana kh	1AT18IS077
17	Abhishek Baghel	1AT18CS002	57	Shreenidhi Shetty	1AT18IS093

18	Adhnan Manzis	1AT18CS004	58	Spoorthy V Ambati	1AT18IS099
19	Adithi Mahesh	1AT18CS005	59	Sri Raksha M R	1AT18IS100
20	Aditi Chatterjee	1AT18CS006	60	Sujatha M	1AT18IS103
21	Aditya B	1AT18CS007	61	Vachan Honnudike	1AT18IS109
22	Anjali	1AT18CS014	62	Vishwas	1AT18IS115
23	Anjali Sharma	1AT18CS016	63	Amilio Dsouza	1AT18IS122
24	Arpita Mazumder	1AT18CS021	64	Aswin Manoj	1AT19CS006
25	Avinash Kumar	1AT18CS025	65	Srujan G V	1AT19IS039
26	Dhanush K	1AT18CS035	66	Gunashree S	1AT16EC050
27	Ishita Katiyar	1AT18CS044	67	Arya L Gowda	1AT17EC013
28	Likith G	1AT18CS049	68	Ranjani S	1AT17EC098
29	Mohammed Sanaullah	1AT18CS057	69	Syed Shahbaz Ali	1AT17EC126
30	Navneet	1AT18CS065	70	Tejaswini G	1AT17EC130
31	NISHITHA D	1AT18CS066	71	Vaishnavi K	1AT17EC135
32	Lohith P	1AT18CS070	72	Amit Bharadwaj	1AT18EC013
33	Pattipati Naga Bhargavi	1AT18CS072	73	Ebin Jorson	1AT18EC038
34	Prajwal Appaya Bilgoji	1AT18CS078	74	Gokul M	1AT18EC064
35	Siddharth Ranjan	1AT18CS104	75	Manoj S	1AT18EC072
36	Syed Imaad Ur Rahman	1AT18CS109	76	Prakruthi Sindhia	1AT18EC095
37	Mithun V	1AT18CS116	77	Raj Sharma	1AT18EC108
38	Anvita Parida	1AT18CS123	78	Sivagama Sundari A	1AT18EC142
39	Sankitha D S	1AT18CS126	79	Sreenidhi.G.A.	1AT18EC146
40	Aswin Manoj	1AT19CS006	80	Sushma J	1AT18EC152

Google Cloud Study Jam

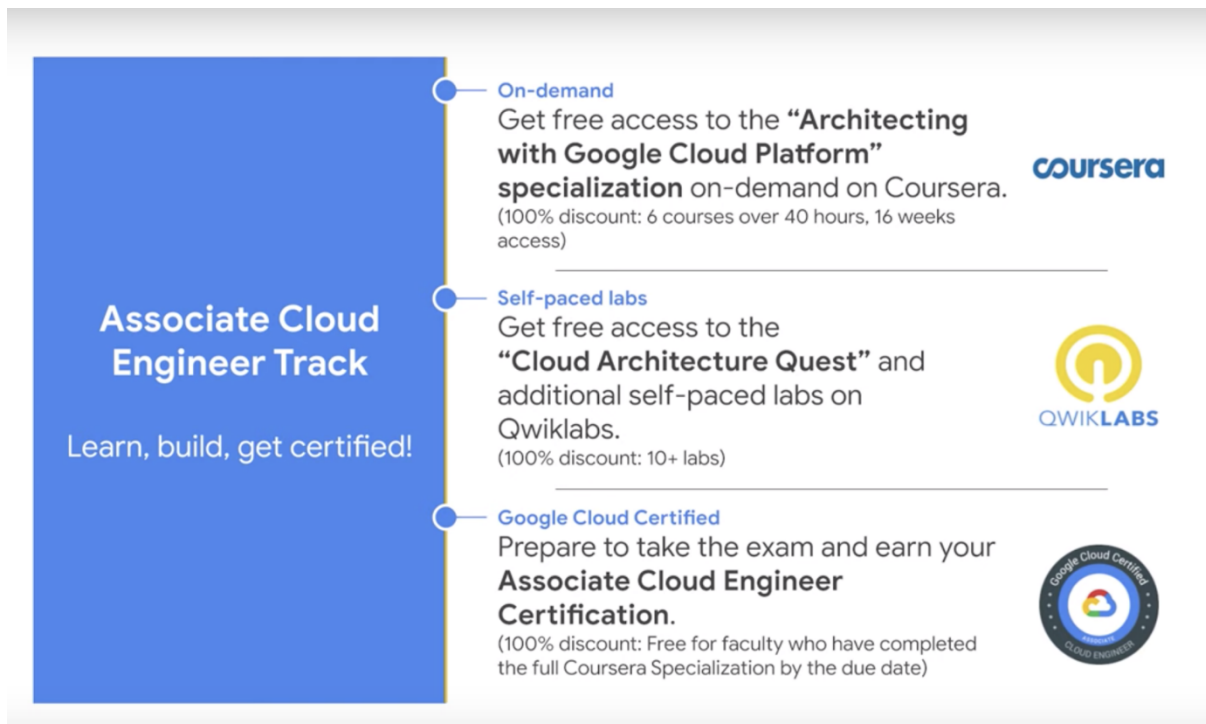
An interactive training session for the students enrolled in the Google Cloud Readiness Program offered by Google Team on campus to make the best use of this opportunity

Date: 15 Feb 2020



Location: Language Lab, Dept of Basic Sciences and Engineering

Duration: 3 hours

No of Students participated: 25



Associate Cloud Engineer Track
Learn, build, get certified!

- On-demand**
Get free access to the **“Architecting with Google Cloud Platform” specialization** on-demand on Coursera. (100% discount: 6 courses over 40 hours, 16 weeks access) 
- Self-paced labs**
Get free access to the **“Cloud Architecture Quest”** and additional self-paced labs on Qwiklabs. (100% discount: 10+ labs) 
- Google Cloud Certified**
Prepare to take the exam and earn your **Associate Cloud Engineer Certification**. (100% discount: Free for faculty who have completed the full Coursera Specialization by the due date) 