

# DEEPENING OF SCIENTIFIC RESEARCH ON 5G USE CASES FOR SOLVING CHALLENGES OF SOCIETY

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## Lab Activities at 5G Lab Arunachal Pradesh

Conducted a course on the introduction to IoT for students of COA, Pasighat.



Conducted a session on IoT for nine IP solution students.



Visited Greenvalley School, Pasighat, to invite students to the 5G Lab and discuss organizing a 5G session at the school.



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## Lab Activities at 5G Lab Arunachal Pradesh

Conducted a session on Agriculture 4.0 technology for 1st- and 2nd-year students of COA, Pasighat.



Officials from Reliance Jio visited the 5G Lab, where we briefed them on ongoing projects and upcoming developments. He also visited Govt. Secondary School, GTC, to discuss conducting a workshop, but the school was closed due to a holiday.



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## Lab Activities at 5G Lab Arunachal Pradesh

College faculty visited the 5G Lab, where we presented ongoing projects, lab equipment, and the NPK Agri Kit sent for rectification. They will be invited again once the kit returns.



A third-year COAP student visited the 5G Lab, where we explained ongoing short courses, projects, and IP solutions. The student expressed interest in joining the next course.

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## Lab Activities at 5G Lab Arunachal Pradesh

Visited the Northeast Institute of Ayurveda & Folk Medicine Research, Pasighat, to discuss offering a 5G course to students, showcase developed IP products, and invite them to the 5G Lab. The director was not available.



An MSc student from CPGS, Umiam, Meghalaya, visited the 5G Lab, where we discussed ongoing projects and invited him to the NEHU 5G Lab for potential research-related products or solutions. He also coordinated with Divya regarding an old IoT kit OS issue, which remained unresolved due to a faulty HDMI cable.

Conducted a session on the basics of IoT for 3rd-year students of the College of Agriculture, Pasighat, covering sensors, microcontrollers, and Raspberry Pi.



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## Lab Activities at 5G Lab Arunachal Pradesh

Discussed the guest list, venue finalization, and event planning for 2nd Sept 2025 with the nodal officer. A faculty member also visited the lab, where the nodal officer briefed them on ongoing projects and activities.



Had a session with 3rd-year students, guiding them on the content for their presentation at the 2nd Sept event. He also prepared the chief guest and guest list for the event.

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## Lab Activities at 5G Lab Assam

Conducted a workshop on “Fundamentals of 5G” for students from Girijananda Choudhury University and Women’s Polytechnic. He also demonstrated the lab to students and dignitaries attending the “Industry 4.0 Adoption by CPSEs” event.



Teams Neutrixeric and Agrisure visited the 5G Lab, where we discussed utilizing the lab for their projects.



Conducted a lab demonstration and workshop on 5G fundamentals for a batch of students from Kamrup Polytechnic.



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## Lab Activities at 5G Lab Assam

Conducted a Practical Internship class for one batch of students in the Lab.



Conducted a Workshop on 5G Fundamentals and Use Cases with a batch of students and faculty members from Assam Skill University.



Workshop and lab demonstration on IoT fundamental and 5G use cases was done with a batch of students

Conducted a Workshop on "5G Basics and Different Use Cases" with a group of students and faculties at Women's ITI, Guwahati.



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## Lab Activities at 5G Lab Assam

Conducted a Lab Demonstration and Workshop on 5G Use Cases with a batch of students from Assam Skill University.



Conducted a Lab Demonstration and Discussion on 5G and its Use Cases with a team of officers from the Assam Employment Exchange Department, Govt. of Assam, and the Ministry of Labour and Employment, Govt. of India (National Career Service).



We were working on troubleshooting the issues with the lab instruments. Few students visited our 5G lab. We have given them a 5G lab demonstration and invite them for workshop/course

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## Lab Activities at 5G Lab Assam

A team of officers from Calance Software Pvt. Ltd. visited our Lab, where we demonstrated the 5G Lab facilities and had a detailed discussion on the project.

Tested the IoT kit received under the internship program.



We had a meeting with Mr. Lukan Das, Chief General Manager, NABARD, where we discussed 5G use cases, ongoing projects, and potential future collaborations. He was also invited to visit our Lab.

Conducted a Lab Demonstration and held discussions on 5G courses, workshops, and product developments with a batch of students.

Tested equipment received for the internship program.



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## Lab Activities at 5G Lab Manipur

Conducted a joint meeting on "5G Lab Utilization Strategy" between Amantya and SINTHAMAN with attendees Mr. Hidam Devananda Singh (Founder, SINTHAMAN), Mr. Prasanta Sharma (Project Manager, Amantya), and Mr. N. Birjit Singh (SME, Manipur). The SINTHAMAN team presented their ongoing project, and discussions focused on their development work and how Amantya could provide technical guidance and infrastructure support through the 5G Lab.



Today, I demonstrated our 5G lab and its services to L. Ronel (AD) and O. Ajoy Singh (TA) from the Department of Telecommunications



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## Lab Activities at 5G Lab Manipur

Today, conducted an intern session on IoT (Internet of Things).



The 5G internship course, spanning 4–5 weeks, was successfully completed today.



Today, three final-year students from MTU, Takyelpat Imphal, visited the 5G Lab.

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## Lab Activities at 5G Lab Manipur

On 11th August 2025, we met Chief Secretary Dr. Puneet Kumar Goel, IAS, and Planning Department Director Dr. R.K. Radhesana Devi to discuss Industry 4.0 initiatives. He later visited Raj Bhavan, Imphal, where he presented opportunities in handloom, handicrafts, women empowerment, and healthcare technology. In the evening, he joined a detailed meeting with the Chief Secretary and senior officials, highlighting the success of the 5G Lab at MIT, Manipur University. Further discussions were held with BSNL and Dhanamanjuri University on possible collaborations with the 5G Lab.



Visited Manipur Technical University, Takyelpat, Imphal, where he met Dr. Loukhrakpam Merin Singh, HOD of ECE, and Assistant Professor Yengkhom Chandrika. He submitted a request letter regarding a proposed 5G Workshop in collaboration with the institute and discussed its benefits for students.



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## Lab Activities at 5G Lab Manipur

Visited BRIC-IBSD and met Director Dr. Nanaocha Sharma, with whom he discussed the 5G Lab and extended an invitation to visit the 5G Lab at MIT.



PhD student presentations were held at the 5G Lab, MIT, where we provided technical support to ensure smooth execution of the event.



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## Lab Activities at 5G Lab Manipur

Visited SERVA DRONE, a startup in Yairipok, Manipur, to review their ongoing work and met team members Laishram Pongthangamba Meitei, Haobam Premgupta, and Laishram Nongpoknganba Meitei. Since the team is using the MIT 5G Lab and collaborating with Amantya, discussions focused on their progress and future plans. He also shared the UNIDO Global Competence Centre for AR/VR/MR Technologies form, which the team welcomed, and planned a follow-up visit to test their product and review new developments.



Visited NIBIAA Device Pvt. Ltd. and met Co-Founder/Director Mr. Aeroshil Nameirakpam and his team. Discussions covered their progress in IP solutions, a new product, and potential collaborations with the MIT 5G Lab. He also shared the UNIDO Global Competence Centre for AR/VR/MR Technologies form, which the team welcomed.



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## Lab Activities at 5G Lab Manipur

Visited the SINTHAMAN office at NIELIT, Akampat, Manipur, and met Mr. Hidam Devananda Singh, Founder Director of SINTHA PAMEL Pvt. Ltd.



Attended an interactive meeting with ESC Chairman Veer Sagar, ESC Director Gurmeet Singh, and Mr. Khoshow from Finerblue Organisation.



Visited the AKUMEN AI office in Koirengei and met CEO Thiyam Akuvan to discuss the upcoming event and the complete survey form.

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## Lab Activities at 5G Lab Manipur

Visited the Auditorium and Centrum to discuss an upcoming event. The faculty requested an official approval letter from the MIT Principal, after which he will follow up with the letter.



Met MIT Nodal Officer Dr. Ghaneshori Thingbaijam and Dr. Romesh Laishram to discuss planning and preparations for the upcoming 5G event, "Demo of 5G Use Cases Developed by Students, Startups, and Innovators."

He later visited the Planning Department to discuss Industry 4.0 project matters.



We and the MIT 5G Lab team provided ServaDrone, led by Haobam Premgupta, with an AC1200 5dBi Antenna Wireless USB Adapter to support their FalconLink drone project. Amantya Technologies assured continued assistance as the project progresses.

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## Lab Activities at 5G Lab Mizoram

Conducted a one-day workshop on “1G to 5G” with the participation of 11 students.



Visited the College of Horticulture, Thenzawl, and met Miss Muani (Teacher-in-Charge) to discuss the 5G project and its agricultural use cases. The discussion covered how the 5G Lab could support students through hands-on experience and research. Miss Muani assured a future meeting with the Academic Dean, who was unavailable due to the ongoing relocation of the academic building.



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## Lab Activities at 5G Lab Mizoram

Delivered a one-hour software applications skill development session followed by a "Evolution from 1G to 5G" workshop with 13 students.



Prepared for visit by finalizing the press statement and continued work on the IP product with 5th Semester students from 1:00 PM onward.



A team from DD News visited the 5G Lab for promotion, covering videos on the lab's projects, activities, and future plans. The feature will be telecast on DD News Mizoram channel.

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## Lab Activities at 5G Lab Mizoram

A workshop on Introduction from 1G to 5G was conducted with 12 students from the Arts Department participating.



11 students from the Arts Department (3rd semester) visited the 5G Lab, where they were given a demonstration of the lab equipment, 5G technology, and its use cases across different fields.



A team from the 3D Lab, including an official and a technician, visited the college and provided a brief introduction about their lab, equipment, and the various 5G use cases in different fields.

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## Lab Activities at 5G Lab Mizoram

Visited Govt. Vanlaiphai School, met the principal and staff during their Cleanliness Day program, and invited them to visit the 5G Lab and participate in upcoming courses.



Visited various offices and startups to conduct a survey on the Global Competence Centre for AR/VR/MR Technology.



Visited different Institute and startups to conduct a survey on the Global Competence Centre for AR/VR/MR Technology



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## Lab Activities at 5G Lab Mizoram

A visitor from PCR School conducted a demonstration on the 5G Lab equipment, 5G use cases, and IoT applications.



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## Lab Activities at 5G Lab Nagaland

Oversaw lab operations, resolved system issues with the IT team, and monitored use cases with students.



Updated lab equipment, coordinated with Naga Digital on their product, and connected with Payal regarding reports and presentations on use cases and IP. He also hosted a visit from an NGO and the college principal to the 5G Lab.

Met the nodal officer regarding the upcoming event, coordinated with Payal on the presentation, briefed students on activities, and visited different locations for the venue.



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## Lab Activities at 5G Lab Nagaland

A 5G use case demo event was held at the college with participants from Immanuel College and NIT Nagaland, along with delegates from Amantya Technologies. The chief guest was Dr. Soumya Chakroborty, Dean and Director of Nagaland Institute of Medical College and Research.



The lab hosted a college activity with the principal and HODs of Botany and Zoology, who discussed preparing a research paper on 5G use cases in aquatic farming.



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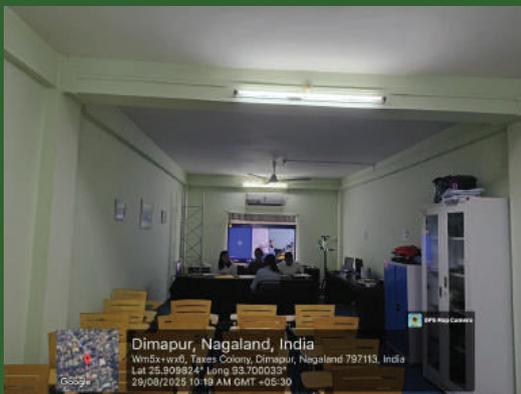


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## Lab Activities at 5G Lab Nagaland

Conducted a workshop on 5G use cases at Nagaland Tools and Training Centre, highlighting the lab's role in product development and implementation, and also conducted a UNIDO survey.



Today, the lab was utilized by the chairman, principal, and HODs for college activities

Connected with Ms. Yapang Longkumer, a young professional from the Employment Exchange Office, to discuss potential collaboration.



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## Lab Activities at 5G Lab Nagaland

Met Ms. Yangerla Jamir, President of All Nagaland Women Entrepreneurs and social worker with SFRUTI Nagaland. He observed her work in developing traditional jewelry and toys with artisans through her NGO. They discussed her initiatives and explored ways to support her through marketing and patent assistance.



Conducted an update session with students on use cases and scheduled a meeting with a young professional from the Employment Exchange Office.

Coordinated with the IT team to resolve a system issue and conducted a session with students on use cases.



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## Lab Activities at 5G Lab Shillong



Visited Laitumkhrah Bengali Secondary School, met the principal, introduced the 5G Lab, invited students to visit, and discussed organizing a workshop at the institute.

Visited Jail Road Boys' HS School, met principal Shri Jibananda Pal and explained about our 5G LAB, invited their students to our 5G LAB and discussed conducting workshop in their institute.



14 Students from KJP Girls' HS School visited 5G LAB, conducted workshop on Introduction to 5G, use cases of 5G and demonstration of 5G LAB.

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## Lab Activities at 5G Lab Shillong

Three officials from the Department of Telecommunication visited the 5G Lab at NEHU.



Visited Kamala Nehru Secondary School, met the principal, introduced the 5G Lab, invited students to visit, and discussed conducting a workshop at the institute.

Visited Government Girls' Higher Secondary School, met the principal, introduced the 5G Lab, invited students to visit, and discussed conducting a workshop at the institute.



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## Lab Activities at 5G Lab Shillong

Conducted a session on 5G fundamentals and use cases for 18 students from ITI Shillong.



Visited St. Xavier's Secondary School, met the principal, introduced the 5G Lab, invited students to visit, and discussed conducting a workshop at the school.



Visited Gandhi Buniyadi Hindi High School, met the principal, introduced the 5G Lab, invited students to visit, and discussed organizing a workshop at the school.



On Day 1, conducted a workshop for 22 electronics students and two faculty members from Laitumkhrach Presbyterian HS School, covering the evolution from 1G to 5G.



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## Lab Activities at 5G Lab Shillong



Six students from KJP Girls' HS School visited the 5G Lab, where we demonstrated the lab facilities and various 5G use cases.

Two students from NEHU's ECE Department visited the 5G Lab, where we demonstrated the "AirAlert" kit in preparation for an upcoming event.



Discussion with students on the "Touch-Based Security" device for an upcoming event.



Six B.Tech students visited the 5G Lab, where we demonstrated the lab and various 5G use cases.



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## Lab Activities at 5G Lab Shillong



The student group working on the “Touch-Based Security Device” visited the 5G Lab to modify their prototype and discuss preparations for presenting it at the upcoming event.

Conducted a session on 5G fundamentals and use cases for eight 2nd-semester ECE students from NEHU.



Twelve students and two faculty members from Sacred Heart Boys’ HS School visited the 5G Lab, where we conducted a workshop on 5G fundamentals, IoT, and use cases, and demonstrated the lab facilities.

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## Lab Activities at 5G Lab Sikkim

Three 4th semester students, during their admission session, visited the lab. A lab demonstration was provided, and since they had visited 3/4 times earlier and shown interest in drones, a drone flying demo was also given to them.



Visited Government Senior Secondary School, Lingchom to discuss and propose conducting a workshop at the school.



A workshop was organised from our Lab with the faculties to introduce them to the Lab facilities and the activities being carried out. The faculties expressed their interest and delight in providing their students for upcoming courses and workshops to be conducted by the Lab. With the new session commencing, classes are scheduled to begin after the 10th of August, following the vacation.



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## Lab Activities at 5G Lab Sikkim

Visited Govt. Girls' Senior Secondary School, Kyongsha, and met Principal Sushma Subba to discuss conducting a workshop programme in the school.



A lab demonstration was conducted for 11th-grade science students from a nearby school.

Six 5th-semester students visited the lab today



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## Lab Activities at 5G Lab Sikkim

Met Dr. Bhakta Kunwar, the new principal of the college, and explained the lab activities. He also sought permission to conduct courses and workshops in the upcoming session.



5 students from 5th semester visited the lab.

Students from the 5th semester Political Science department revisited the lab, where a brief demonstration was conducted.



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## Lab Activities at 5G Lab Sikkim

Two first-year IT students from a nearby school, who had earlier attended a 3-day workshop, revisited the lab today.



Visited Government Senior Secondary School, Lingchom, to deliver workshop certificates and welcome a new batch. As the principal had recently changed, the certificates were received by Shiva Prasad Pradhan, faculty of the Arts department, on the principal's behalf.

Visited Denjong Pema Choeling Academy to invite students for a lab demonstration and a three-day workshop. Principal Mr. Tashi confirmed their visit for the day after tomorrow due to a local holiday tomorrow.



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## Lab Activities at 5G Lab Sikkim

**Day 1: Conducted a workshop with 10th-grade students of Denjong Pema Choeling Academy, introducing basic science terminologies related to 5G wireless technology.**



**Visited PM Shri Government Senior Secondary School, Pelling, to invite students to participate in a workshop programme at the lab.**



**Day 2: Conducted a workshop with 10th-grade students of Denjong Pema Choeling Academy, focusing on the evolution from 1G to 5G.**



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## Lab Activities at 5G Lab Sikkim

**Day 3: Conducted a workshop covering 5G technology and the basics of RAN, explaining how RAN works and connects devices in daily use.**



**Day 4: Conducted a workshop on the working of IoT with 26 students of Denjong Pema Choeling Academy.**

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## Lab Activities at 5G Lab Tripura

A few students visited the lab, where 5G Lab awareness and 5G use cases were demonstrated to them.



Students visited in 5G Lab for 5G awareness and Lab demonstration.



Visited the College of Fisheries to schedule another workshop, plan further 5G courses, and explore IP solutions.



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## Lab Activities at 5G Lab Tripura

Seven students visited the 5G Lab, attended a 5G awareness program and lab demonstration, and enrolled in the upcoming 5G courses.



Conducted a workshop at the College of Fisheries with selected Ph.D. students.

Ten visitors attended the 5G Lab, where a workshop on 5G introduction, IoT devices, and their use cases was conducted.



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## Lab Activities at 5G Lab Tripura

Some school students visited the 5G Lab today, received knowledge on 5G and lab demonstration, and attended a workshop on the evolution from 1G to 5G.



Conducted an AR/VR/MR survey at STPI Agartala with Mr. Somyadeep Dhar, People Officer, HRM.



Conducted an AR/VR/MR survey at Tripura University, Agartala with Mr. Sameer Kumar (Project Associate, IT Department, Age 25, Male).  
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8434433676.