

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

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Lab Activities at 5G Lab Arunachal Pradesh

Visited IGJ Government School, Pasighat, met the principal, invited the school to the 5G Lab, and proposed a workshop; the principal will follow up after compartment exams.



Visited Gandhi Secondary School, Pasighat, to discuss arranging a 5G course and workshop.

Conducted a session on “Introduction of 5G & Use Cases” for 22 final-year COAP students.



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Lab Activities at 5G Lab Arunachal Pradesh

Visited Government Polytechnic, Pasighat, to meet the principal about a proposed student workshop; the principal was unavailable, so a follow-up visit will be scheduled, and a planned school visit was canceled due to bad weather.



Demonstrated IP-based agricultural products to students and led field testing and hands-on sessions with MPK Mitra, Megh Alert Pro, and Krishi Vayu Monitor, while coordinating with hardware and software teams on drone and new IoT kit issues.



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Lab Activities at 5G Lab Arunachal Pradesh

Visited Government Gandhi Secondary School, Pasighat, met the principal to propose a Monday 5G awareness session and lab visit; also met with the principal of Kendriya Vidyalaya, Pasighat, who agreed to host a 5G session mid-August but declined a lab visit.



Visited Government Higher Secondary School, Pasighat, discussed a 5G & IoT session; the principal will schedule after next week. An attempted session at Govt. Gandhi Sec. School was postponed due to a power outage and heat, and rescheduled for tomorrow/Monday.

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Lab Activities at 5G Lab Arunachal Pradesh

Conducted Day 1 of the 5G course at Government Gandhi Secondary School, Pasighat, covering “Evolution of 1G to 5G” and “Introduction to 5G Technology” with 53 participants



Conducted Day 2 of the 5G course at Government Gandhi Secondary School, Pasighat on “Use Cases of 5G & Basics of IoT” with 23 participants and coordinated with the hardware team to resolve the IoT kit issue.

Hosted four RSS members, the Nodal Officer, and the Dean of the College of Agriculture, Pasighat in the 5G Lab, discussed ongoing projects and developments, and engaged the hardware team to address the kit issue.



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Lab Activities at 5G Lab Assam

Praveen Singh, Co-Founder and CEO of Tubelight Communications Ltd., along with Team IndiMeat members Sayanika Deka and Jubanayan Saiki, visited the 5G Lab.



Visited the Guwahati University 5G Lab, discussed our lab's capabilities and use cases with the professor in charge, and secured a commitment for their team to visit our lab next week.

Conducted an internship course for three students from AMTRON. Delivered a workshop on "5G and its different use cases" to a batch of 10 students.



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Lab Activities at 5G Lab Assam

Met with COO Sh. Omkarnath Rath at Assam Startup's The Nest to discuss the 5G Lab's benefits for students and startups, and invited their team to visit our lab next week.



Conducted a second internship course for three additional AMTRON students.



Conducted internship courses for three separate student batches.



Conducted internship courses for three separate student batches.

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Lab Activities at 5G Lab Assam

Conducted internship courses for two student batches and provided a lab demonstration to visitors from Chixel Group of Institute.



Conducted further internship courses for two more student batches.



Conducted an internship course for two batches of students.

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Lab Activities at 5G Lab Assam

Delivered a lab demonstration and discussion on various 5G use cases to faculty and students from MIT Shillong.



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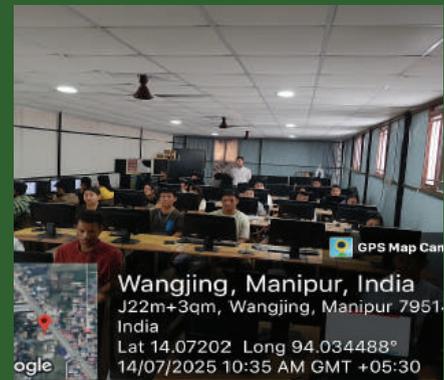


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Lab Activities at 5G Lab Manipur

A workshop was successfully conducted on "Introduction to 5G & Use Cases," with participation from 24 students.



A meeting was held with the Principal of Nongmeikapam Gopal College to propose a 5G workshop at the college, aimed at helping students integrate 5G capabilities into their projects and startup ideas.

Visited the Institute of Co-operative Management (ICM), Lamphelpat, and proposed a 5G workshop; also invited the Director and faculty to visit the MIT 5G Lab.



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Lab Activities at 5G Lab Manipur

Met with the Principal of Johnstone Higher Secondary School to discuss organizing a 5G workshop and invited the school to visit the MIT 5G Lab.



Discussed conducting a 5G awareness workshop at Ram Lal Paul Higher Secondary School and extended an invitation to visit the 5G Lab.



Held a discussion at Churachand Higher Secondary School regarding a 5G awareness session and invited the school for a hands-on visit to the 5G Lab.



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Lab Activities at 5G Lab Manipur

Met with the Vice Principal of Ananda Singh Higher Secondary School to propose a 5G workshop and invited the school to the MIT 5G Lab for further engagement.



Hosted 14 students from the Electronics and Electrical Engineering departments at the 5G Lab and demonstrated available facilities and project opportunities.



Conducted Day 1 of the 5G internship course on "Evolution of Mobile Communication from 1G to 5G."



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Lab Activities at 5G Lab Manipur

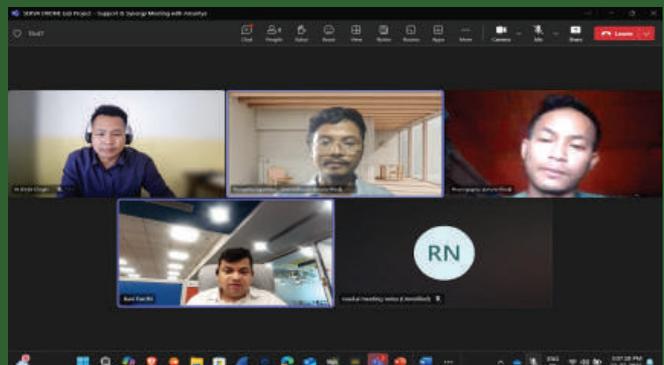
Hosted Mr. Hidam Devananda from startup 'SINTHAMAN' and discussed project collaboration after a tour of the 5G Lab facilities.



Six recent alumni from the Civil and Electronics departments visited the 5G Lab for an orientation session.



Facilitated a meeting between Amantya Technologies and the startup SERVADRONE to explore R&D collaboration at the 5G Lab.



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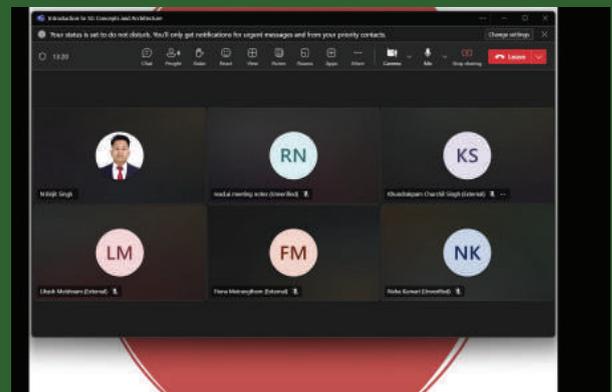


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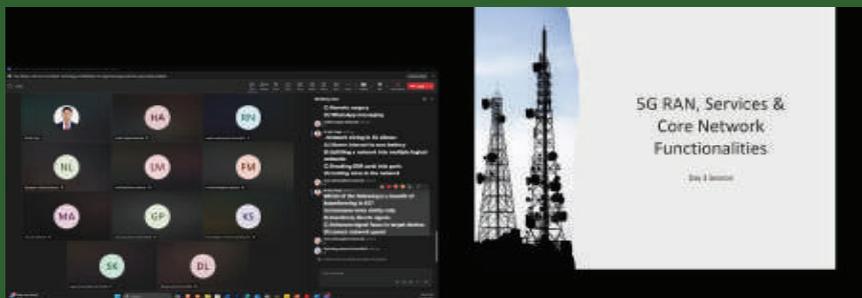


Lab Activities at 5G Lab Manipur

Conducted Day 2 of the 5G internship course on "Introduction to 5G Concepts and 5G Architecture."



Conducted Day 3 of the 5G internship course on "5G RAN & Services and 5G Core Network & its Functionalities" and prepared flex banners for the awareness program.



Conducted a 5G awareness program in collaboration with the Institute of Cooperative Management (ICM), Lamphelpat, presenting on 5G technology, its applications, and potential to around 80 participants, and invited them to visit the MIT 5G Lab for research and project work; later delivered Day 4 of the 5G internship course on IoT fundamentals and use cases.



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Lab Activities at 5G Lab Manipur

Followed up with SINTHAMAN founder Mr. Hidam Devananda Singh and requested a formal project proposal to utilize the MIT 5G Lab.



Conducted an intern session on IoT (Internet of Things).



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Lab Activities at 5G Lab Mizoram

Fifth-semester BCA students demonstrated lab equipment and 5G use cases, followed by a discussion on IP solutions.



Third-semester students demonstrated lab equipment and 5G use cases.



Scheduled workshop was canceled due to another program; instead, I demonstrated lab equipment and 5G use cases to staff before participating in a curriculum meeting held in the 5G Lab.



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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.



Delivered a speech on 5G technology at the Awareness and Capacity Building Programme on Green Investment for Student Entrepreneurs and MSMEs, organized by Mizoram Startup Mission at HD Rosanga Multipurpose Hall, Government Serchhip College.



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Lab Activities at 5G Lab Mizoram

Held a Microsoft Teams discussion on the 5G Lab with chief guests from MSMEs—Sir Ravi, Sir Prasatan, and Sir Jonathan—following the main session.



Visited Presbyterian and Stain schools during exams, discussed the 5G Lab with principals, and agreed to reconvene once the schools reopen.



A BCA department visitor demonstrated lab equipment and use cases, and I conducted an “Evolution from 1G to 5G” workshop with nine students.



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Lab Activities at 5G Lab Mizoram

During the PM Vishwakarma Carpentry Training, I was allotted a two-hour daily slot to deliver digital topic sessions, including an “Introduction from 1G to 5G” workshop continuing until Wednesday.



At the PM Vishwakarma Carpentry Training, I delivered a speech on installing and using social media applications, conducted a “5G Use Cases in Agriculture” workshop at 2 PM, and initiated the IP Solution Project with fifth-semester students.



Conducted a certificate course on 5G and its use cases with six students.



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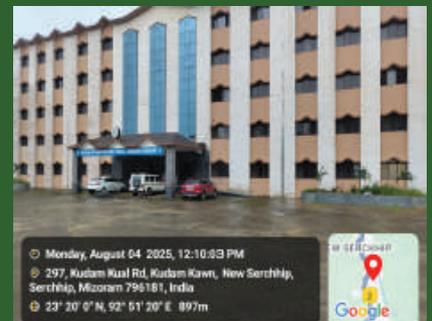
Lab Activities at 5G Lab Mizoram

Due to heavy rainfall, the field visit was canceled and we continued working on the IP solution with fifth-semester students.



Conducted a one-day workshop on "1G to 5G" with 11 students.

Visited the College of Horticulture in Thenzawl, met teacher-in-charge Miss Muani to discuss agricultural 5G use cases and lab benefits, attempted to meet the Academic Dean (unavailable due to building relocation), and arranged a future follow-up.



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Lab Activities at 5G Lab Nagaland

Launched the summer internship at Immanuel College with 12 BSc (Zoology and Botany) students.



Continued the summer internship program with the same 12 BSc (Zoology and Botany) students.

Delivered a theory session on embedded systems as part of the summer internship with 12 BSc (Zoology and Botany) students.



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Lab Activities at 5G Lab Nagaland

Conducted a workshop on ChatGPT for project reporting and other use cases with 12 BSc (Zoology and Botany) students.



Conducted a workshop on IoT devices, sensors, and weathering kits with 12 BSc (Zoology and Botany) students.



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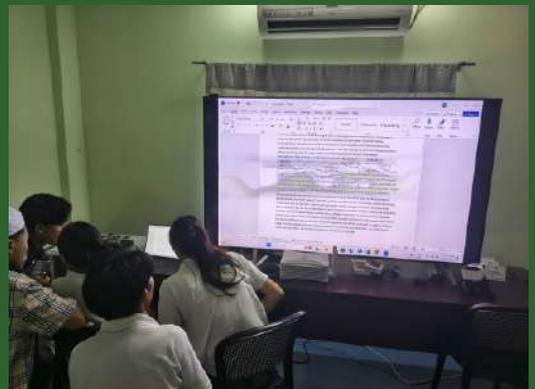


Lab Activities at 5G Lab Nagaland

Guided 12 BSc (Zoology and Botany) students in developing a hydroponic farming module and its project report.



Guided 12 BSc (Zoology and Botany) students in developing a hydroponic farming module and its project report.



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Lab Activities at 5G Lab Nagaland

Facilitated the reporting and observation phase of the hydroponic farming module project with 12 BSc (Zoology and Botany) students.



Observed the hydroponic module as plants began to sprout and guided 12 BSc (Zoology and Botany) students on the project report use case.



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Lab Activities at 5G Lab Nagaland



Assisted 12 BSc (Zoology and Botany) students in preparing a PPT and project report for the hydroponic module.

Visited Nagaland Tools and Training Centre, met Manager Lipeni, received a positive response for a one-day workshop with first-year diploma students next week; also visited Carmel School, which was closed for summer vacation.



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Lab Activities at 5G Lab Nagaland

Conducted a practical session and observation of the hydroponic farming use case.



Delivered a session on the different types of sensors, capacitors, and resistors available in the lab.



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Lab Activities at 5G Lab Shillong

Two PhD students from NEHU, Daisy Deka and Nirmal Talukdar, visited the 5G Lab for an overview and demonstration.



Conducted a workshop on Introduction to 5G and its use cases for 12 students and two faculty members of KJP Girls Higher Secondary School at the 5G Lab, including equipment demonstrations.

One PhD student from NEHU, Pawan Kumar Das, visited the 5G Lab for an overview and demonstration.



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Lab Activities at 5G Lab Shillong



Coordinated with the IT team to resolve an OS issue on the Megh Alert Pro IoT kit and distributed 5G course certificates to the fourth batch of students.

Four PhD students from NEHU—Wandarisa Sungoh, Rublesha Shabong, Darilangi S. Lyngdoh, and Monikordor Mawblei—visited the 5G Lab for an overview and demonstration.



Visited Laitumkhras Secondary School, met Principal Rika Baruah to discuss a workshop; received an invitation to conduct it next week.



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Lab Activities at 5G Lab Shillong



Consulted with Rohit Khatana of the IT team to resolve the Ubuntu login issue on the Megh Alert Pro IoT kit and hosted B.Tech student Tulsī Barua from NEHU's ECE department at the 5G Lab.

Visited Shillong Academy Secondary School, met the acting principal, introduced the 5G Lab, invited them for a lab visit, and discussed conducting a workshop.



Conducted Day 1 workshop at Laitumkhrāh Assamese Secondary School on the evolution from 1G to 5G with 35 studen



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Lab Activities at 5G Lab Shillong

Conducted Day 2 workshop at Laitumkhrah Assamese Secondary School on 5G fundamentals and use cases with 33 students.



Visited K.C. Secondary School, met Principal Shrawan, presented the 5G Lab, invited students for a lab visit, and discussed a potential workshop.



Visited Laitumkhrah Bengali Secondary School, met the principal, introduced the 5G Lab, invited students for a lab visit, and discussed a potential workshop.

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Lab Activities at 5G Lab Shillong

Conducted field testing of the Megh Alert Pro IoT kit with a student group.



Visited Jail Road Boys' HS School, met Principal Jibananda Pal, introduced the 5G Lab, invited students for a lab visit, and discussed a potential workshop.

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Lab Activities at 5G Lab Sikkim

Conducted Day 1 workshop for 20 participants from Govt. Sr. Secondary School, Lingchom, covering the evolution from 1G to 5G and an introduction to 5G.



Conducted Day 2 workshop for 20 participants from Govt. Sr. Secondary School, Lingchom, on 5G RAN concepts and practical applications.



Conducted Day 3 workshop for 20 participants from Govt. Sr. Secondary School, Lingchom, focusing on 5G use cases and practical scenario demonstrations.



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Lab Activities at 5G Lab Sikkim

Hosted three IT students from the Lingchom workshop in the 5G Lab for a networking session on OSI, TCP/IP, IP/MAC basics, Layer 2 & 3 devices, and protocols (HTTP/S, DNS, DHCP), followed by a lab demonstration.



Welcomed Mona Hang Subba from the admin section for a guided demonstration of the 5G Lab facilities.



Three fourth-semester students visited the lab during their admission session, received a full lab demonstration, and witnessed a drone flight demo; they have visited several times before.



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Lab Activities at 5G Lab Sikkim

Twenty-one students from Govt. Girls' Sr. Sec School, Kyongsha visited the lab for certificate distribution and a demonstration of the facilities.



Thirty students from Govt. Sec School Langang attended a workshop in the lab.



Two college students visited the lab for a brief demonstration and a discussion on IP-based solutions.



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Lab Activities at 5G Lab Sikkim

On the first day back after summer vacation, met with the newly appointed principal and all college faculty to introduce the 5G Lab and discuss future collaborations.



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Lab Activities at 5G Lab Tripura

Conducted a workshop on “Evolution from 1G to 5G,” “5G Lab Introduction,” and “5G Use Cases” with professors and Ph.D. students on July 18, 2025.



Met with Dr. Debashish Sen, Principal of the College of Agriculture, to discuss how the 5G Lab and its use cases can support their programs.



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Lab Activities at 5G Lab Tripura

Visited Baba Agro Nursery, Tripura's largest nursery, and discussed smart farming applications of 5G and IoT sensors with owner Pranay Kanti Deb.



Met Dr. Bijoya Bhattacharjee, Principal Scientist in Agri-Biotechnology at ICAR Agartala, to understand their challenges and explore lab support.



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Lab Activities at 5G Lab Tripura

Visited the Directorate of Horticulture and Soil Conservation and discussed 5G use cases with Business Development Manager Joydev Roy to address their technical challenges.



Met Dr. Phani Bhushan Jamatia, Director of Agriculture at Krishi Bhawan, to discuss agricultural development programs.



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Lab Activities at 5G Lab Tripura

Visited Tripura Institute of Technology, met Assistant Professor Dr. Chinu Mog, and invited their students to participate in 5G courses and lab workshops.



Visited the State Poultry Farm and met Utpal Sarkar (Senior ARDA, Animal Resource Development) to discuss 5G use cases for hatchery technology improvements.



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Lab Activities at 5G Lab Tripura

Visited the Office of the CEO and Project Director of the IGDC CREFLAT Project, Tripura Forest Department, and met Dr. Rima Saha (Project Implementing Officer) to share 5G use cases for their development initiatives.



Visited the State Agricultural Research Station and met Dr. Uttam Saha (Joint Director of Agriculture) to discuss how 5G use cases can support farmer development projects.

