A Report on workshop on
"AI Innovation Workshop: Building AI Application using Lang Chain & MCP"
Organized by Department of CSE- Artificial Intelligence
on 17.03.2026

Report Submitted by: Mr. Toralkar Pawan, Assistant Professor, Department of Computer Science & Engineering – Artificial Intelligence.
Venue: SRB-215
Time: 9:00 AM to 5:00 PM
Mode of Conduct: Offline.
Attendees Count: 17
Resource Person Details Name: Mr. Shaik Uzair Ahmed Designation: Founder & CEO, Novatech Technologies Private Limited.
Report Received on 30.03.2026.

Mr. Shaik Uzair Ahmed is the Founder & CEO of Novatech Technologies Private Limited and an Applied AI Engineer with expertise in building reliable and scalable AI systems. His work focuses on Large Language Models (LLMs), Retrieval-Augmented Generation (RAG), structured prompting, and reducing hallucinations in AI applications. He has developed impactful projects like evidence-based AI assistants and is deeply involved in designing safe, real-world AI solutions.
Name: Mr. Manoj Kumar Pendem Designation: Technical Associate
Organization: Novatech Technologies Private Limited

Mr. Manoj Kumar Pendem is a Technical Associate at Novatech Technologies Private Limited with strong skills in Data Science, Machine Learning, and Full-Stack Development. He has hands-on experience in building backend systems, RESTful APIs, and AI-powered applications, including RAG-based healthcare assistants. With internship experience at reputed institutions and multiple full-stack projects, he brings practical industry knowledge and implementation-focused expertise to the workshop.

Objective of the Program

- To provide a clear understanding of the evolution of Artificial Intelligence from traditional Machine Learning to modern Generative AI.
- To familiarize students with Large Language Models (LLMs) and their practical applications in real- world scenarios.
- To introduce LangChain and enable participants to build AI applications using prompt engineering and LLM chains.
- To explain the concept of Model Context Protocol (MCP) and its role in enabling secure interaction between AI models and external tools.
- To develop hands-on skills by guiding students to build functional AI applications such as chatbots, FAQ assistants, and documentation helpers.

Event details:

The one-day workshop commenced with a formal inauguration. The dignitaries invited to the dais were Dr. R. Kalpana, Professor & Head, Department of Computer Science & Engineering – Artificial Intelligence; Mr. J. Viswanath, Assistant Professor, Department of Computer Science & Engineering – Artificial Intelligence; and the Resource Persons, Mr. Shaik Uzair Ahmed, Founder & CEO, Novatech Technologies Private Limited, and Mr. Manoj Kumar Pendem, Technical Associate, Novatech Technologies Private Limited. The program began with a Welcome Address delivered by Mr. J. Viswanath. After this, Dr. R. Kalpana addressed the gathering and highlighted the significance of emerging technologies such as Artificial Intelligence and modern web development. The resource persons were then formally introduced. The session was handed over to Mr. Shaik Uzair Ahmed and Mr. Manoj Kumar Pendem, who initiated the technical session on "Building AI Applications using LangChain & MCP."

During the workshop, the resource persons provided in-depth knowledge on modern Artificial Intelligence concepts, explaining the evolution from traditional Machine Learning to Generative AI and the practical applications of Large Language Models (LLMs). They introduced participants to LangChain, demonstrating prompt engineering techniques and guiding them in building simple AI assistants. The concept of Model Context Protocol (MCP) was also explained, highlighting its role in enabling secure interaction between AI models and external tools. The workshop included hands-on activities where participants developed AI-based applications such as chatbots and documentation assistants. The event witnessed active participation from students, with engaging discussions and practical learning throughout the session. The workshop concluded with a vote of thanks proposed by Mr. Toralkar Pawan, Assistant Professor and coordinator of the event, expressing gratitude to the dignitaries, resource persons, and participants for making the programme a successful and enriching learning experience.

Outcomes of the Event

- Gained a clear understanding of modern Artificial Intelligence concepts, including Generative AI and Large Language Models (LLMs).
- Developed practical skills in building AI applications using LangChain and Model Context Protocol (MCP).
- Enabled the design and development of basic AI-based solutions such as chatbots and documentation assistants.
- Enhanced problem-solving abilities and provided exposure to industry-relevant tools and technologies.
- Improved understanding of real-world implementation of AI systems through hands-on projects and practical demonstrations.

Program Outcomes (POs) Covered

1. **PO1 – Knowledge of Computing:** Gained knowledge of modern Artificial Intelligence concepts, including Generative AI, Large Language Models (LLMs), and web development fundamentals.
2. **PO3 – Design/Development of Solutions:** Enabled the development of real-world AI applications such as chatbots, AI assistants, and responsive websites.
3. **PO5 – Modern Tool Usage:** Introduced tools and technologies such as LangChain, Model Context Protocol (MCP), and modern web development frameworks.
4. **PO9 – Individual and Team Work:** Encouraged collaboration during hands-on activities, coding sessions, and interactive discussions.
5. **PO10 – Communication Skills:** Improved the ability to understand and present technical concepts related to AI and web development.
6. **PO12 – Life-Long Learning:** Motivated continuous learning by exposing participants to emerging trends in AI, LLMs, and full-stack development.

SDG Goals Aligned with the Event

1. **SDG 4 – Quality Education:** Delivered practical, hands-on learning in Generative AI using LangChain and Model Context Protocol (MCP).
2. **SDG 8 – Decent Work and Economic Growth:** Built industry-relevant skills in AI application development, preparing for emerging roles in AI and technology.
3. **SDG 9 – Industry, Innovation, and Infrastructure:** Encouraged innovation through the development of intelligent AI applications using LangChain and modern tools.
4. **SDG 17 – Partnerships for the Goals:** Promoted collaboration between academia and industry through expert-led sessions on real-world AI technologies.

Conclusion

The workshop concluded successfully, providing a valuable platform for gaining practical knowledge in Artificial Intelligence and web development. The sessions on LangChain and Model Context Protocol (MCP) helped in understanding the development of modern AI applications, while the web development segment strengthened foundational skills. The hands-on activities and interactive discussions enhanced overall learning and engagement. The event proved to be an enriching experience, bridging the gap between theoretical concepts and real-world implementation.