A Report on Hands-on Workshop on "Decoding the voice from Raw Audio to STT Application" Organized by Department of Computer Science & Engineering-Artificial Intelligence on 20.12.2025

Report Submitted by: Mrs. Esther Merlin A, Assistant Professor, Department of Computer Science & Engineering-Artificial Intelligence.
Resource Person: Mr. Modin Rasheed Ahamed, Cloud Software Engineer, Arista Networks India Pvt. Ltd.
Participants: 68
Mode of Conduct: Offline.
Venue and Time:AI ML Lab & 10:00 AM to 5.00 PM
Report Received on 20.12.2025.

Hands-on Workshop conducted by Alumni "Decoding the voice from Raw Audio to STT Application". The **Department of Computer Science and Engineering (Artificial Intelligence)** organized a **Hands-on Workshop on "Decoding Voice from Raw Audio to Speech-to-Text (STT) Application Development"** for the benefit of **III B.Tech students** on **20.12.2025 at 10:00 AM**.
The workshop was graced by eminent dignitaries including **Dr. R. Kalpana**, Head of the Department – CSE (Artificial Intelligence), **Dr. G.Nagaswetha**, Alumni Relations Officer, Coordinator **Dr. K. Chokkkanathan** and **Mrs. A. Esther Merlin**, Department Alumni Coordinator. The technical session was conducted by the **distinguished alumnus and resource person, Mr. Modin Rasheed Ahamed**, Cloud Software Engineer at Arista Networks.

The event commenced with opening remarks by **Dr. R.Kalpana**, who expressed her gratitude to the management for supporting hands-on technical workshops that strengthen students' practical skills and industry readiness. She emphasized the importance of experiential learning and alumni-led technical sessions in exposing students to real-world AI applications and current industry practices.
Dr. G.Nagaswetha addressed the gathering and highlighted the significance of alumni involvement in organizing technical workshops that enhance students' understanding of emerging technologies and bridge the gap between academic learning and industry requirements.
Mrs. A. Esther Merlin introduced the resource person and welcomed him to share his technical expertise, real-world project experience, and insights into speech-to-text technologies and audio processing techniques used in the industry.

The resource person delivered an engaging and interactive **hands-on workshop**, demonstrating the process of decoding voice from raw audio and converting it into text using Speech-to-Text (STT) applications. The session included practical explanations, real-world use cases, and demonstrations aligned with current AI and cloud-based development practices.
The workshop witnessed enthusiastic participation from approximately **180 students**, who actively engaged in discussions and practical learning activities, gaining valuable exposure to real-world AI application development.

Objective of the Session:
The primary objectives of the hands-on workshop were:

- To provide practical exposure to **decoding voice from raw audio data**
- To familiarize students with the **Speech-to-Text (STT) application development process**
- To introduce students to **audio preprocessing and speech recognition techniques**
- To enhance understanding of **real-world AI applications in speech processing**
- **To bridge the gap between theoretical learning and industry-oriented implementation**

Session Highlights:

Mr. **Modin Rasheed Ahamed**, an alumnus of the 2024 batch and currently working as a **Cloud Software Engineer** at **Arista Networks**, delivered an engaging and insightful talk on placement preparation beyond classroom learning.

Key points discussed during the session:

1. **Introduction to Speech-to-Text (STT) Technology**
    - Overview of speech recognition systems and their real-world applications
    - Importance of STT in AI-driven solutions such as virtual assistants, call analytics, and accessibility tools
2. **Understanding Raw Audio Data**
    - Basics of audio signals and common audio formats
    - Challenges involved in handling raw audio data
    - Need for preprocessing before speech recognition
3. **Audio Preprocessing Techniques**
    - Noise reduction and signal normalization
    - Feature extraction fundamentals for speech processing
    - Preparing audio data for accurate speech-to-text conversion
4. **Speech-to-Text Application Workflow**
    - End-to-end process of converting voice to text
    - Integration of speech recognition models
    - Handling accuracy, latency, and performance issues
5. **Hands-on Demonstration**
    - Live demonstration of decoding voice from raw audio
    - Step-by-step explanation of STT application development
    - Practical insights into implementation and debugging
6. **Industry Practices and Real-World Use Cases**
    - Industry standards followed in speech recognition projects
    - Use of STT applications in cloud-based AI systems
    - Scalability and deployment considerations
7. **Career and Skill Development Insights**
    - Relevance of speech processing skills in AI careers
    - Tools and technologies in demand for AI and cloud roles
    - Importance of continuous learning and project-based skill development
8. **LinkedIn Profile & Resume Building**

    - Importance of maintaining a professional LinkedIn profile
    - Tips to optimize LinkedIn headlines, summaries, and project descriptions
    - Guidance on showcasing AI projects, and certifications
    - Best practices for building an industry-ready resume aligned with technical roles

Students Engagement:
The session witnessed enthusiastic participation from final-year students. The interaction segment was lively, with students posing thoughtful questions related to technical preparation, internships, and growth in the AI industry.

Interaction with the Head of the Department:
Following the session, **Mr. Modin Rasheed Ahamed** met with the **Head of the Department, Dr. R.Kalpana.** , to discuss the outcomes of the workshop and explore possibilities for future technical collaborations and alumni-supported initiatives. The interaction focused on strengthening industry–academia linkage and enhancing hands-on learning opportunities for students in emerging AI technologies.

Vote of Thanks:
The session concluded with a **vote of thanks** proposed by Mrs.Esther Merlin A, expressing heartfelt gratitude to Mr. Modin Rasheed Ahamed for his time, insights, and willingness to guide the next generation of AI professionals. Appreciation was also extended to the Head of the Department, the Alumni Relations Officer, and the Management for supporting this initiative.

Conclusion:

The **Hands-on Workshop on Decoding Voice from Raw Audio to Speech-to-Text (STT) Application Development** proved to be highly beneficial for the participating students. The session effectively bridged the gap between theoretical concepts and real-world AI implementation by providing hands-on exposure to speech recognition and audio processing techniques. In addition to technical learning, students gained valuable guidance on **LinkedIn profile optimization and resume building**, enabling them to professionally showcase their skills, projects, and certifications. Overall, the workshop enhanced students' technical competence, industry awareness, and career preparedness, motivating them to apply AI concepts in real-world applications and strengthen their professional profiles.

Outcome of the Program:
The **Hands-on Workshop on Decoding Voice from Raw Audio to Speech-to-Text (STT) Application Development** had a positive and measurable impact on the participating students. The key outcomes of the program are as follows:

- Students gained practical knowledge of **processing raw audio data** and converting speech into text using **Speech-to-Text (STT) technologies**.
- Participants developed a clear understanding of the **end-to-end workflow of STT application development**, including audio preprocessing and speech recognition techniques.
- The workshop enhanced students' awareness of **real-world AI applications** and industry practices related to speech processing and cloud-based systems.
- Students were exposed to **industry-relevant tools and technologies**, improving their readiness for AI and software development roles.
- Guidance on **LinkedIn profile optimization and resume building** helped students understand how to effectively present their technical skills, projects, and certifications to potential employers.
- The session motivated students to undertake **hands-on projects and continuous learning** in emerging AI domains.
- Students gained increased confidence in applying AI concepts to practical problems and preparing for future technical and career opportunities.