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A seasoned academic with a deep-rooted passion for computer science, I bring 19 years of teaching and research expertise to my role as Professor at the School of Computer Science & Engineering at Sandip University in Nashik, India. Holder of a Ph.D. in computer applications, I am driven by an unwavering commitment to advancing the frontiers of knowledge in this dynamic field.

My research endeavors have resulted in over 33 publications, including 2 papers in ESCI and 17 papers in high-impact journals indexed by Scopus. These contributions have earned me recognition within the academic community, and I am proud to have successfully supervised 1 Ph.D. student, with 4 more currently under my guidance.

An active member of several professional organizations, including being a life member of ISTE and CSI, I am dedicated to fostering a collaborative and stimulating learning environment for my students. My passion for computer science is infectious, and I am committed to inspiring the next generation of innovators and problem solvers.

Title: The Role of Computer Science in Addressing Climate Change

Special Session Organizer: Dr. Mohammad Muqeem, Professor

Affiliation: Dept of Computer Science and engineering, Sandip University, Nashik, India

Abstract

Climate change, characterized by the Earth's long-term temperature rise, poses an unprecedented threat to our planet's ecosystems, human societies, and future generations. Computer science, with its ability to process vast amounts of data, develop groundbreaking technologies, and simulate complex systems,

holds immense potential to address this critical global crisis.

This session will explore the multifaceted role of computer science in mitigating and adapting to climate change. We will delve into the development of renewable energy sources, such as solar and wind power, utilizing computational modeling to predict climate patterns and impacts, and harnessing data analysis and machine learning to optimize energy efficiency and identify sustainable transportation solutions.

Through real-world examples and case studies, we will demonstrate how computer science is revolutionizing the energy landscape, enabling informed decision-making, and empowering communities to transition towards a low-carbon future. We will also address the challenges and opportunities that lie ahead, emphasizing the importance of collaboration between computer scientists, climate scientists, policymakers, and industries to fully realize the potential of technology in tackling climate change.

By the end of this session, participants will gain a comprehensive understanding of the diverse applications of computer science in addressing climate change and be inspired to further explore the transformative power of technology in building a more sustainable world.

Outline:

- 1. Introduction to climate change and its impacts
- 2. The role of computer science in addressing climate change
- 3. Examples of computer science applications in climate change mitigation and adaptation
- 4. Challenges and opportunities for computer science in addressing climate change