

**A Two Day National Conference on New Horizons in Computer Science (NHCS2K25) Day 1  
Session 1 Report**

The plenary session 1, on “Artificial Intelligence for Disaster Risk Reduction” delivered by Dr. T.V. Vijay Kumar, Professor at the School of Computer and Systems Sciences, Jawaharlal Nehru University (JNU), New Delhi, was a highlight of the Two-day National Conference on **New Horizons in Computer Science (NHCS-2K25)**. The session, held on 28th August 2025 at 11:00 a.m., attracted a large audience comprising academicians, researchers, industry professionals, and students, reflecting the growing interest in AI applications for societal resilience.

Dr. Vijay Kumar began his address by emphasizing the increasing complexity of modern risk landscapes—ranging from cyber threats and financial fraud to natural disasters and public health emergencies. He highlighted that traditional risk management approaches, while effective in structured environments, often fall short when dealing with dynamic, high-dimensional, and uncertain scenarios. This, he argued, is where Artificial Intelligence (AI) emerges as a transformative force.

The Professor elaborated on how AI, particularly Machine Learning (ML), Deep Learning, and Natural Language Processing (NLP), enable proactive risk identification and mitigation. He cited real-world applications such as predictive analytics in disaster management, where AI models analyse satellite imagery and weather data to forecast floods or cyclones with high accuracy. In healthcare, AI-driven systems have been instrumental in early disease outbreak detection by mining social media and clinical data.

A significant portion of the talk was dedicated to AI in cybersecurity. He explained how anomaly detection algorithms and behavioral analytics can identify potential threats in real time, reducing response time and minimizing damage. He also discussed the role of AI in financial risk assessment, where credit scoring models and fraud detection systems leverage vast datasets to improve decision-making and reduce economic vulnerabilities.

The speaker underscored the importance of ethical AI in risk management. He cautioned against algorithmic bias, lack of transparency, and data privacy concerns, which could exacerbate rather than mitigate risks. Dr. Vijay Kumar concluded by envisioning a future where AI-powered risk management becomes integrated into national and organizational strategies. He called for interdisciplinary collaboration between computer scientists, domain experts, and policymakers to build resilient systems capable of adapting to emerging threats.

The lecture was followed by an interactive Q&A session, where in participants engaged with the speaker on topics such as AI's role in climate risk modelling, the challenges of implementing AI in resource-constrained environments, and the future of autonomous risk response systems.

Earlier the Inaugural session of the Two-day National Conference on New Horizons in Computer Science **NHCS- 2K25** jointly organized by the PG and Research Department of Computer Science and the Department of Information Technology started in a grand manner. Dr. J. Parasuraman, Principal, J.J. College of Arts and Science (Autonomous), Pudukkottai, welcomed the gathering. Following this Dr. Kavitha Subramanian Trustee, Karpaga Vinayaga Educational Trust delivered the presidential address and Dr. T. V. Vijay Kumar Professor, School of Computer and Systems Sciences, Jawaharlal Nehru University (JNU), New Delhi, delivered the keynote address and released the Souvenir. The first copy of the Souvenir was received by the Trustee madam, J.J. Group of Institutions. Later Dr. S. Sudha Vice Principal and Head Department of Computer Science delivered the Vote of Thanks.