



BUILDING ARTIFICIAL INTELLIGENCE MODELS FOR PREDICTING THE STRUCTURAL DURABILITY OF CONCRETE STRUCTURES

Event No	CS069
Organizing Department	Computer Science and Engineering
Associate Dept. NSC	Institution of Engineers (India) Office of Alumni Relations
Date	13/05/2023
Time	09:00 AM to 04:00 AM
Event Type	Seminar
Event Level	State
Venue	Thanam Hall
Total Participants	88
Faculty - Internal	5
Faculty - External	3
Students - Internal	80

Related SDG



Involved Staffs

Sl	Name	Role
1	Yuvaraj N	Convenor
2	Mouthami K	Coordinator
3	Premkumar D	Coordinator

Outcome

Fostered collaboration among participants. Researchers and professionals from various backgrounds exchanged ideas, discussed challenges, and explored potential solutions. The platform created a conducive environment for networking and building partnerships, which can lead to further advancements in the field.

By leveraging AI techniques, attendees gained valuable insights into predicting the structural durability of concrete structures. This knowledge empowers them to make informed decisions regarding maintenance strategies and optimize resource allocation. By accurately assessing the durability of concrete structures, professionals can implement timely repairs and preventive measures, thereby ensuring the longevity and sustainability of infrastructure.

Event Summary

The one-day seminar organized by the Institution of Engineers (India) along with the Department of CSE on "Building Artificial Intelligence Models for Predicting the Structural Durability of Concrete Structures" provided an excellent platform for professionals and researchers to explore the potential of AI in enhancing the durability assessment of concrete structures. The event disseminated knowledge, showcased research advancements, and fostered participant collaboration. By leveraging AI techniques, attendees gained valuable insights into predicting the structural durability of concrete structures, enabling informed decision making, optimized maintenance strategies, and improved infrastructure sustainability.

Technical Session - I An expert and researchers in structural engineering and AI Mr Guru Purushoth S delivered presentations during the technical sessions. They shared their research findings, methodologies, and case studies related to building AI models for predicting the structural durability of concrete structures. The sessions gave attendees valuable insights into this domain's latest advancements, challenges, and potential solutions. Participants had the opportunity to learn from experts and gain a deeper understanding of the subject matter. Technical Session - II In Technical Session II Dr Yuvaraj N, HoD/CSE deliberated on AI models for predicting the structural durability of concrete structures utilize machine learning and other AI techniques to assess factors influencing durability. They analyze data on material properties, environmental conditions, and construction practices. The models estimate remaining service life and deterioration potential by incorporating these factors. Key steps include data collection, feature selection, model development, training, validation, and

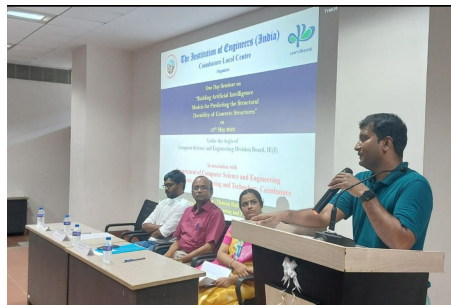
performance evaluation. Challenges include data availability and model interpretability. Future directions involve advanced AI techniques and hybrid models. AI models enhance maintenance strategies, resource allocation, and infrastructure sustainability.



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