Yogesh Haribhau Kulkarni   • You   ...

AI Advisor (Helping organizations in their AI journeys) | PhD (Geometric Modeling) | Tech Colum…

53m • 🌐

🎤 Gave a talk today on "Use of Neural Networks in Geometric Algorithms" at the Department of Mechanical Engineering, COEP (College of Engineering Pune) Technological University 🎓 📐 My alma mater.

Explored how artificial intelligence is changing the world of mechanical engineering. Used a real example to show how geometric dimension reduction can be solved with neural networks through 'MidcurveNN'. Looked at how complex shape problems move into the AI space where encoder decoder architectures learn to compute the midcurve of thin polygons. Simple idea yet a very powerful leap.

MidcurveNN is a mix of my PhD research in geometric modeling and new advances in artificial intelligence. It focuses on how a neural network can take any profile shape and learn to compute its midcurve. That is the beauty of learning geometry.

The dataset I created for this work is now live on Kaggle **https://lnkd.in/dEZ4C6M**

I also published a notebook that shows how to use this dataset **https://lnkd.in/dAniZrx**

If you are curious about the rare intersection of geometry and deep learning I would love to collaborate guide or contribute. This space is growing and we can push it even further together 🚀

More info:

Github: **https://lnkd.in/fpsNT2P**

Extended Abstract: **https://lnkd.in/d9JZjsx**

Similar/old Talk: **https://lnkd.in/dQPJbWd**

Looking forward to more exciting conversations and discoveries 🎯

 COEP Technological University #coep #coeptech #mech #geom

#GeometricModeling #AI #DeepLearning #NeuralNetworks #Kaggle #OpenSource #DataScience

#ArtificialIntelligence #MachineLearning #Python #GitHub #Research #Engineering #MidcurveNN

#PhDLife #Innovation #TechCommunity 😄