

Aneesh Panchal

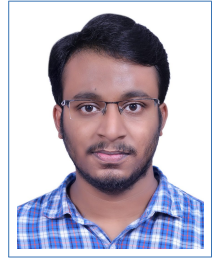
Curriculum Vitae

Dept. of Computational and Data Sciences
Indian Institute of Science, Bangalore, IN

✉ aneeshp@iisc.ac.in

🌐 [My Webpage](#)

🐙 [Github](#) [in](#) [Linkedin](#)



Education

- 2024 – present **PhD Engineering, Computational and Data Sciences, Indian Institute of Science, Bangalore.**
Thesis: **Scientific Machine Learning (SciML)** (*tentative*)
Supervisor: **Dr. Ratikanta Behera**
- 2020 – 2024 **Bachelor of Technology, Mathematics and Computing (Minor in Industrial Mathematics), Delhi Technological University, Delhi (Formerly, Delhi College of Engineering, Delhi).**
CGPA: **9.74/10** (Dept. Rank: **2/152**)
- 2019 **Higher Secondary Examination, Rajkiya Pratibha Vikas Vidyalaya, Sector XI, Rohini, Delhi.**
Percentage: **94.6 %** (School Rank: **1/140**)
- 2017 **Secondary Examination, Rajkiya Pratibha Vikas Vidyalaya, Sector XI, Rohini, Delhi.**
CGPA: **10/10** (School Rank: **1/105**)

Research Publications

Peer-Reviewed Journals

- 2025 Aneesh Panchal, Abhishek Kumar Singh, Vivek Kumar, and Mani Mehra. Swarmesh: Swarm-driven adaptive mesh for singular perturbation problems. *Swarm and Evolutionary Computation*, volume 96, page 101964. Elsevier, 2025.
- 2025 Aneesh Panchal, Kirti Beniwal, and Vivek Kumar. Predator prey scavenger model using holling's functional response of type iii and physics-informed deep neural networks. *International Journal of Applied and Computational Mathematics*, volume 11, page 44. Springer, 2025.

Conference Proceedings

- 2024 Aneesh Panchal and Vivek Kumar. Seismic-inspired simplified earthquake optimization. In *Computational Methods in Science and Technology*, pages 176–182. CRC Press, 2024.

Available PrePrints

- 2025 Aneesh Panchal, Kainat Khan, and Rahul Katarya. Empirical analysis of nature-inspired algorithms for autism spectrum disorder detection using 3d video dataset. *arXiv preprint arXiv:2501.01202*, 2025.

Paper & Poster Presentations

Paper Presentations

- 2024 **Aneesh Panchal, Vivek Kumar**, *Seismic-inspired simplified Earthquake Optimization Algorithm*, 4th International Conference on Computational Methods in Science & Technology, 2024.
May 2, 2024 - May 3, 2024.
- 2024 **Aneesh Panchal, Abhishek Kumar Singh, Vivek Kumar, Mani Mehra**, *Optimized Adaptive Meshes using Modified Particle Swarm Optimization algorithm for Singularly Perturbed Problems*, International Conference on Computations and Data Science, 2024.
March 8, 2024 - March 10, 2024.
- 2024 **Aneesh Panchal, Kirti Beniwal, Vivek Kumar**, *Predator Prey Scavenger modeling and Parameter estimation using Physics Informed Deep Neural Network Optimization*, International Conference on Pure and Applied Mathematics, 2024.
February 22, 2024 - February 23, 2024.

Poster Presentations

- 2023 **Aneesh Panchal**, *Predator Prey Modeling using Probabilistic Approach: A Review*, Modelling and Tackling Complex Biological Systems 2023.
October 13, 2023 - October 14, 2023.
- 2023 **Aneesh Panchal**, **Kainat Khan**, and **Rahul Katarya**, *KANHA – Kinetically Adaptive Neurodevelopmental-Disorder Highway Assistance* (formerly, “Assessment using Doraemon look-alike Evaluation Virtual Assistant”), Young Researchers’ Conclave 2023.
July 19, 2023.

Research Experience

Indian Institute of Technology, Delhi

- Jun, 2023 – **Optimized adaptive mesh for Singularly perturbed problems.**
Jul, 2023 Developed an algorithm to generate optimal adaptive meshes using modified particle swarm optimization for convection dominated singularly perturbed problems.
Advisor : **Prof. Mani Mehra**, *Professor, Dept. of Mathematics*, IIT Delhi, IN
- Computational Analytics and Learning Intelligence Based Research Exploration (CAL-IBRE), Delhi Technological University, Delhi
- Sept, 2022 – **KANHA – Kinetically Adaptive Neurodevelopmental-Disorder Highway Assistance.**
Jul, 2023 Proposed a technique which provides real time road safety technology for neurodevelopmental patients which is a personalized assistant which suggests optimal road routes using their facial expressions and surrounding analysis simultaneously for learning process.
- Jul, 2023 – **Empirical Analysis of Autism Spectrum Disorder Detection using Nature Inspired Algorithms from 3D Video Dataset.**
Apr, 2024 Comparative study for various nature inspired algorithms for their feature selection ability for binary classification type problem. Got 100% accuracy with 69.81% feature reduction and 96.87% accuracy with 99.68% feature reduction.
Advisor : **Prof. Rahul Katarya**, *Professor, Dept. of Computer Science & Engineering*, DTU, Delhi, IN

Fellowships & Awards

- 2025 Secured **3rd Position** out of **80 teams** in NPCI Hackathon, PRAVEGA–XI, Indian Institute of Science & National Payments Corporation of India, IISc.
- 2024 Secured **2nd Position** out of **25 teams** in SoLitRev – Literature Review, Evolute 24, SIAM & Dept. of Applied Mathematics, DTU.
- 2023 Secured **1st Position** in Poster Presentation (Machine Learning Track) – *Young Researchers’ Conclave (YRC 2023)*, CSIR-CRRI, Delhi.
- 2021 Secured **4th Position** out of **100 teams** in Bitgrit Video Popularity Prediction Hackathon.
- 2017 Received **Academic Excellence Award** by Govt. of NCT Delhi for securing **10 CGPA** in class X.

Academic Achievements

- 2024 Qualified *GATE 2024* (Paper Code: DA) with All India Rank **58**.
- 2023 Qualified *GATE 2023* (Paper Code: MA) with All India Rank **1441**.
- 2020 Qualified *JEE Advanced 2020* with All India Rank **10719**.
- 2020 Qualified *JEE Mains 2020* with **98.34%ile**.
- 2019 Qualified *JEE Mains 2019* with **96.78%ile**.

Position of Responsibility & Extra-Curricular Activities

- 2022 – 2023 **Head of Mathematics and Research**, SIAM, DTU, Delhi.
- 2021 – 2022 **SIG Head**, Society for Industrial and Applied Mathematics (SIAM), DTU, Delhi.
- 2020 – 2021 **Member, Stage (Script Analysis Team)**, Pratibimb – The Dramatics and Film-making Society, DTU, Delhi.
- 2018 – 2019 **President**, Mathematics Society, R.P.V.V. Sector 11, Rohini, Delhi.
- 2017 – 2019 **Teaching Assistant**, ATAL Tinkering Lab, R.P.V.V. Sector XI, Rohini, Delhi.
- 2015 – 2019 **Hockey Player (Forward)**, School Hockey Team, R.P.V.V. Sector XI, Rohini, Delhi.