

Aditya Rajesh Thakare

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EDUCATION

National Institute of Technology Karnataka, Surathkal

Bachelor of Technology in Mechanical Engineering

Minor in Computer Science

Aug 2024 – May 2028

CGPA - 9.1/10

CGPA - 7.5/10

Maharashtra State Board

Higher Secondary Certificate (XII) - Percentage - 93.17%

2024

PROJECTS

Design of Variable Gap Fish Sorting Filter | *Fusion 360*

May 2025 – Present

- Designed a mechanically adjustable fish sorting mechanism with synchronized rod movement.
- Developed a variable gap mechanism by converting rotary motion of gears to linear one of rods, similar to Bostwick gate mechanism.
- Investigated across various materials according to the working saline and humid conditions to theoretically decide on Aluminium alloys.
- Presented the design and working principle during the AMES Project Expo.

Bandgap Engineering in Cross-Linked Phononic Crystals | *ANSYS Mechanical, MATLAB*

2026

- Investigated cross-linked phononic crystal architectures for vibration attenuation under the guidance of an IIT Bombay faculty member.
- Integrating properties of periodic boundary conditions in materials to design self adjusting structures to cancel frequencies at ranges by bandgap formation. Digitally simulated using Ansys and Matlab.

Design and Analysis of Baffles for Shell-and-Tube Heat Exchanger | *ANSYS, Fusion 360*

2026

- Designed and analysed various baffle geometries like segmental, helix, angular in heat exchanger.
- Compared these geometries using thermodynamic parameters like efficiency, pressure drop, etc.

EXPERIENCE

Institution of Engineers NITK Chapter | *Executive and SIG Marketing head*

Sep 2025 – Present

- Applied engineering concepts using ANSYS through simulation-based mechanical studies.
- Conducted technical events and mentored students in mechanical engineering fundamentals.
- Assisted in prototype development activities involving simple mechanical mechanisms.

Yaapt | *Knowledge Ambassador*

Apr 2025 – Dec 2025

- Developed study resources including notes, PYQs and model solutions for first-year engineering subjects.
- Collaborated with the founding team to explore AI-assisted educational workflows.
- Utilized JIRA and Confluence for project management, documentation and coordination.

E-Cell NITK | *Finance and Management Executive*

Oct 2024 – Present

- Contributed to sponsorship and marketing activities for INCUB8 2025 involving over 50,000 participants.
- Assisted in preparing sponsorship proposals and investor-facing presentations.

TECHNICAL SKILLS AND RELEVANT COURSEWORK

Simulation: Modal Analysis, Harmonic Response, Thermal Analysis, CFD

Software: ANSYS Mechanical, ANSYS Fluent, Fusion 360, JIRA, Confluence

Programming: Python, MySQL

EXTRA-CURRICULAR

Mechanical Broom Prototype | *Campus Innovation Challenge, INCUB8 2025*

2025

- Designed a mechanical broom prototype that collects dry debris without having the need to bend.
- Pitched it in the Campus Innovation Challenge of INCUB8 2025, winning 2nd prize of ₹6500.

Sports: Basketball, Swimming

Skills: Baking