

# Suriya M.J

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## EDUCATION

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### National Institute of Technology, Warangal

B.Tech – Chemical Engineering | 2024-2028 | CGPA:6.53

### New Millennium School, Bahrain

Class XII | 2024 | 85.6%

Class X | 2022 | 93%

## PROJECTS

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### Cyclone Separator Performance Analysis – Lapple Model (March 2026)

- Modelled grade efficiency and cut size of a standard Lapple cyclone separator using Microsoft Excel
- Performed sensitivity analysis varying inlet velocity from 10-25m/s, demonstrating 37% reduction in cut size and nearly doubling collection efficiency at 5 $\mu$ m
- Calculated pressure drop of 2160 Pa using Shepherd & Lapple correlation

### Drug Dissolution Rate Analysis – Noyes-Whitney Model (March 2026)

- Analysed pharmaceutical dissolution kinetics of paracetamol using Noyes-Whitney model in Microsoft Excel
- Developed Python scripts using matplotlib to generate dissolution profiles and sensitivity analysis graphs
- Demonstrated nearly 5x improvement in dissolution by increasing particle surface area from 0.0005 to 0.005m<sup>2</sup>

### Design Thinking Case Study – Tic Tac Packaging Redesign (November 2024)

- Identified usability limitation in Tic Tac packaging and proposed redesigned single-dispense mechanism
- Awarded S grade (100/100) for communication and conceptual thinking

## TECHNICAL SKILLS

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**Tools & Software:** Microsoft Excel, Python (matplotlib, NumPy), Audacity, Canva, MS Word

**Programming:** Python – data analysis, numerical computation, visualization | C++ | MySQL – database management

**Web Development:** HTML, CSS

**Languages Known:** English, Hindi, Tamil, French

## LEADERSHIP & EXPERIENCE

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### President – Rising Stars Gavel Club (July 2020-June2021)

- Led club operations during COVID-19, managing virtual meetings and sustaining member engagement
- Won 50+ awards including Best Speaker, Best Evaluator and Table Topics across multiple Sessions
- Recognized for confident stage presence, vocal clarity and audience engagement

### Additional Secretary – International Students Working Group (ISWG), NIT Warangal (August2025-Present)

- Representing International Students in official working group at NIT Warangal
- Served as Master of Ceremonies for official ISWG events

### Master of Ceremonies

- Hosted and moderated multiple official events at school and college level
- Strong public speaking, time management and event coordination skills

## MEMBERSHIPS

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Student member , Indian Institute of Chemical Engineering (IICChE)

## ADDITIONAL INFORMATION

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**Academic Interests:** Pharmaceutical engineering, process design, separation processes, oil & gas, sustainable chemical processes, heat transfer applications, fluid mechanics, and industrial chemical manufacturing.

**Portfolio:** [suriyamj.in](http://suriyamj.in)

## EXTRACURRICULAR & INTERESTS

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- Multilingual communicator – fluent in Tamil, English, Hindi and French, with international school background in Bahrain
- Passionate about pharmaceutical engineering and process design with focus on bridging chemical engineering fundamentals with industry applications.