

RAHUL JUKANTI

CAD Automation Engineer | NX Open API Specialist | .NET Developer

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PROFESSIONAL SUMMARY

Results-driven **CAD Automation Engineer** with 2+ years of experience bridging the gap between mechanical design and software engineering. Expert in **NX Open API**, **C#**, and **.NET Framework**, with a proven track record of delivering 15+ production-grade applications. Specialized in utilizing **SOLID design patterns** and **PLM integration** (Teamcenter) to reduce design cycle times by **40%** and eliminate manual data entry errors.

TECHNICAL SKILLS

- **CAD Automation:** Siemens NX, NX Open API, Knowledge Fusion (KF), Block UI Styler, Parametric Modeling, PMI, Drafting Automation.
- **Languages & Frameworks:** C# (.NET 4.5/4.8), VB.NET, Python, SQL, REST API, JSON, XML, WinForms, WPF (MVVM).
- **Development Practices:** OOP, SOLID Principles, Design Patterns (Factory, Singleton), Agile/Scrum, Git, Unit Testing, DLL Management.
- **Engineering Domain:** Rotating Equipment (Fans/Blowers), GD&T, BOM Management, Teamcenter PLM, SAP/ERP Integration.

PROFESSIONAL EXPERIENCE

Citius Solutions Pvt Ltd

CAD Automation Engineer (Application Programmer)

Hyderabad, India

Nov 2023 – Present

- **Automated Design Systems:** Architected and deployed 15+ custom NX Open (C#) applications for centrifugal fan systems. Successfully reduced design cycle time by **40%** by programmatically handling complex parametric constraints.
- **Design Validation Framework:** Developed a robust validation engine implementing 50+ ASME/ISO rule checks. Achieved **100% code compliance** and reduced manual design review iterations by **60%**.
- **Enterprise PLM Integration:** Engineered a bidirectional synchronization service between Siemens NX and **Teamcenter/SAP** using REST APIs. Automated BOM transfer and metadata updates, eliminating **70%** of manual data entry work.
- **UI/UX Development:** Built intuitive, user-friendly custom dialogs using **WPF** and **WinForms** within the NX environment, ensuring seamless adoption for a team of 20+ mechanical engineers.
- **Code Optimization:** Refactored legacy codebases using **SOLID principles** and asynchronous programming, resulting in a **35% improvement** in application execution speed.
- **Python Scripting:** Developed a suite of Python scripts for batch processing CAD files and bulk data extraction, streamlining reporting workflows for engineering management.

Citius Solutions Pvt Ltd

Graduate Engineering Trainee

Hyderabad, India

Apr 2023 – Oct 2023

- **Rapid Prototyping:** Mastered NX Open API and .NET Framework to deliver the first production-ready automation tool within 3 months of joining.
- **Requirements Analysis:** Collaborated with senior architects to deconstruct industrial fan design workflows, translating mechanical requirements into technical software specifications.
- **Debugging & Maintenance:** Performed root-cause analysis on complex API integration issues, implementing critical bug fixes for existing CAD customization tools.
- **SDLC Execution:** Gained hands-on proficiency in the full Software Development Life Cycle, including requirements gathering, version control (Git), and unit testing.

EDUCATION

B.Tech in Mechanical Engineering

St. Peter's Engineering College, Hyderabad

2017 – 2021

CGPA: 7.8/10

Relevant Coursework: CAD/CAM, Machine Design, Industrial Engineering, Python Programming.