



Preparing Your CAD Data for AI

Unlocking Practical Automation in
Engineering Design

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Founder of NexCAD.ai



Uzair Syed

Intro

- ✓ MSc CAE, BSc Mechanical
- ✓ IMechE Chartered Engineer
- ✓ 15 yr in machine design, automation and manufacturing
- ✓ Founder of NexCAD

Engineering Data Is Not AI-Ready

Data Is The Foundation



01

AI success depends on clean inputs

02

Treat CAD as structured knowledge

03

Preparation is the bottleneck

CAD Files with Structured Signals



Consistent naming
conventions



Design intent
captured in
models

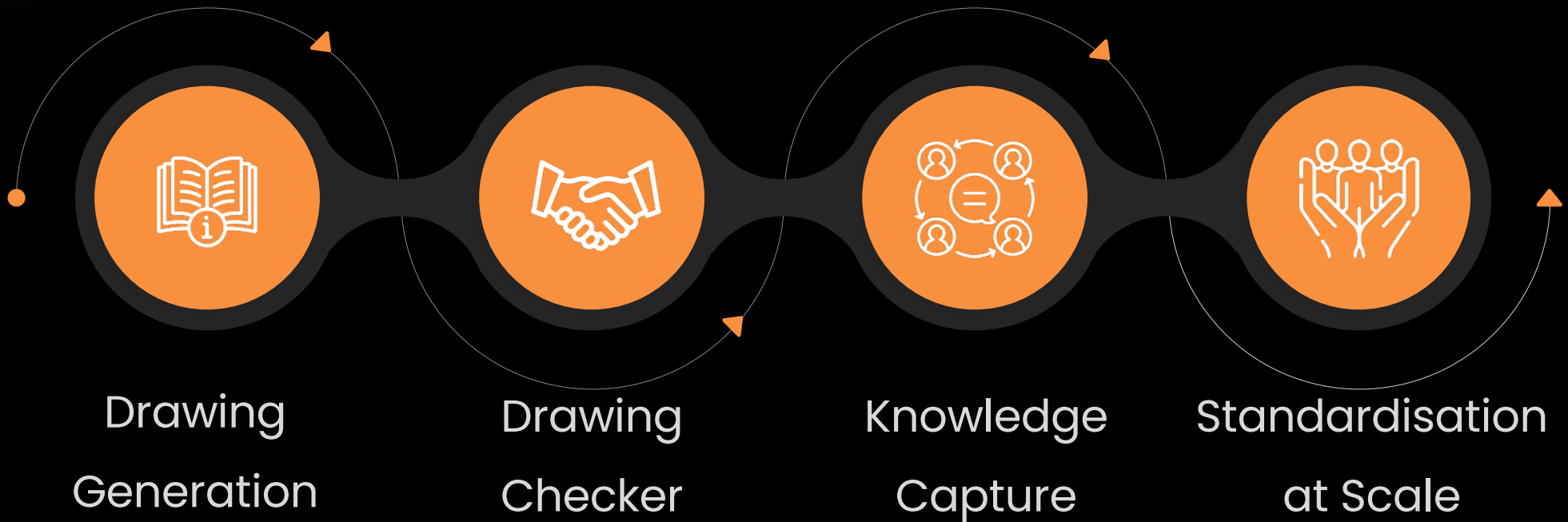


Rich metadata
and part
numbering

How to Prepare Your CAD Data

- Standard drawings templates
- Enforce consistent GD&T and dimensioning
- Ensure title blocks are complete and structured
- Reduce ambiguity in notes and annotations
- Maintain consistency across teams

Structured Data Unlocks Automation



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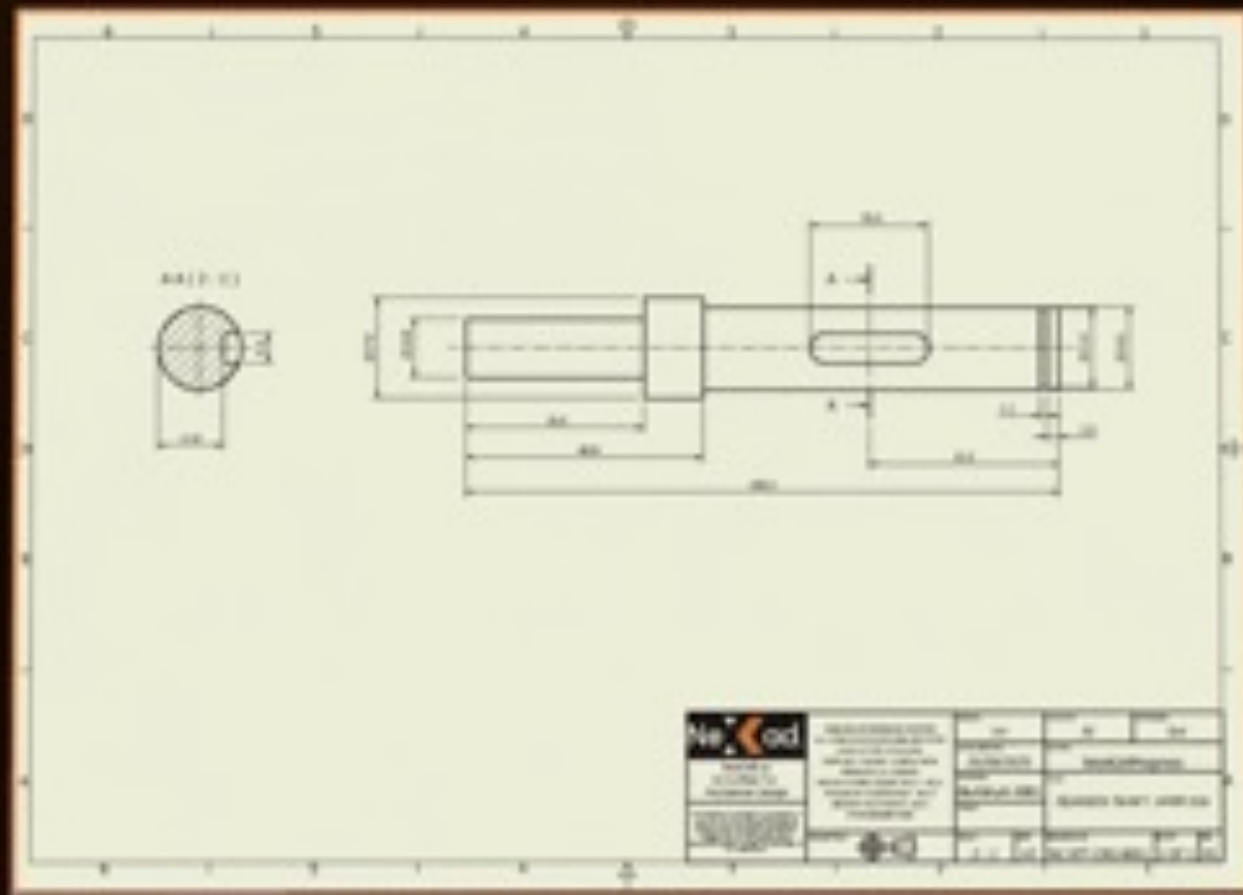


Ready

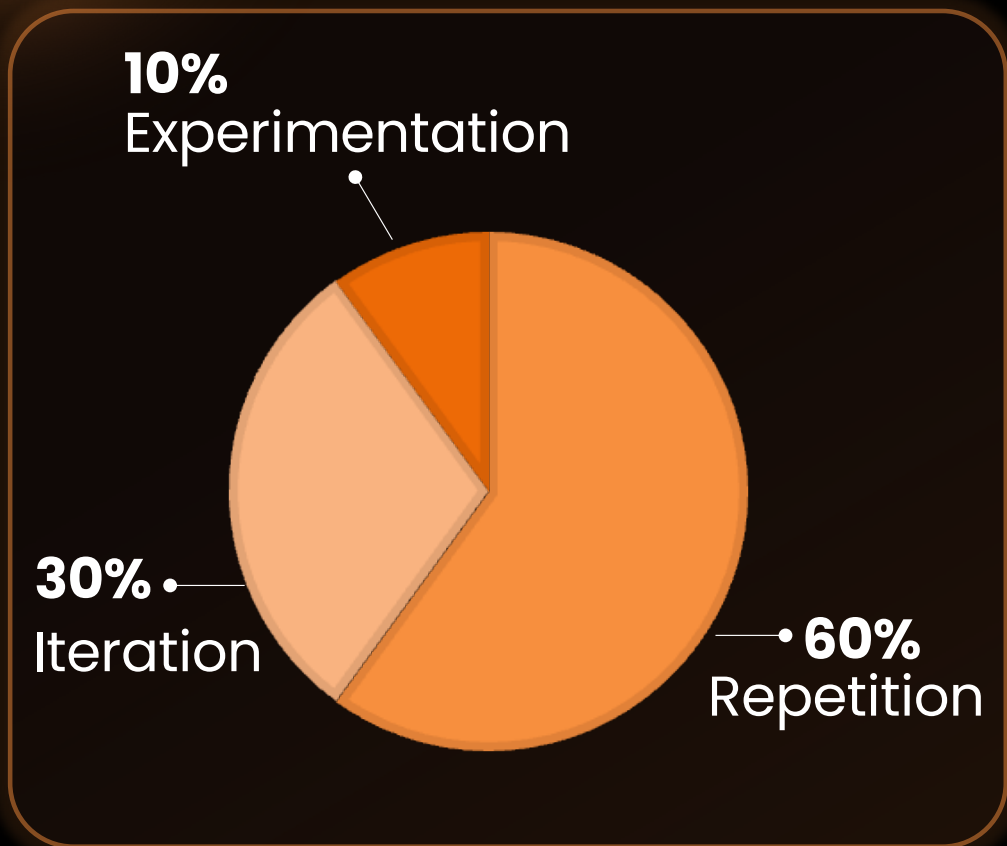


46°F
Rain

your instant drawing review assistant



Key Takeaways



Prepare your CAD data



Automate repetitive workflows first.



Small wins lead to big transformation.

**Continue the
conversation
@ Stand A13**



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Founder @ NexCAD.ai - Ai Co-Pilot for
mechanical design



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