Part 10: SolidWorks & Revit Instead of AutoCAD - INDUSTRY EXPANSION

**Digital Garden: Industry Tools Edition**Time: 3 hours • 'CAD Mastery Expanded!'

## 🔄 Skill Transfer Map

You already know these concepts - just different buttons!

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| MICHAEL: Apply Your Skills | JESSE: Integration Support | ✓ Check When Done |
| **STEP 10.1: SOLIDWORKS FOR MECHANICAL**  **1. AutoCAD → SolidWorks**  → Both do technical drawings  → SolidWorks: Parametric 3D  → Your CAD knowledge applies!  → Industry standard for products  **2. Sketch Mode (Like AutoCAD)**  → New Part → Sketch  → Draw rectangle: Same tools!  → Smart Dimension: 100mm x 50mm  → Exit sketch → Extrude: 25mm  → You just made 3D from 2D!  **3. Assembly (New Skill)**  → Multiple parts together  → Mates (constraints)  → Motion studies  → Save as: mechanism.sldprt | Software setup: → SolidWorks trial → Revit trial → Configure units | ☐ SolidWorks part made ☐ Sketch → 3D done ☐ Assembly created ☐ Files saved |
| **STEP 10.2: REVIT FOR ARCHITECTURE**  **4. AutoCAD → Revit**   → Same company (Autodesk)  → BIM vs CAD  → Your architectural knowledge transfers  → Industry standard for buildings  **5. Quick Building**  → Wall tool → Draw walls  → Door tool → Place in walls  → Window tool → Auto-cuts openings  → Stairs → Auto-generates!  → So much faster than AutoCAD!  **6. Families (Like Blocks)**  → Load Family → Furniture  → Place instances  → Parameters drive variations  → Your block knowledge applies | File exchange: → Test STL export → Test FBX export → Material mapping | ☐ Revit building made ☐ Walls/doors/windows ☐ Families placed ☐ BIM understood |
| **STEP 10.3: INTEGRATION**  **7. From SolidWorks to Maya**  → Export → STL or OBJ  → Maya imports perfectly  → Add materials in Maya  → Render with V-Ray  **8. From Revit to 3DS Max**  → Export → FBX  → Maintains materials!  → 3DS Max native support  → Ready for visualization  **9. Python Automation**  → SolidWorks: Has API  → Revit: Dynamo (visual scripting)  → Both support automation  → Your scripting skills transfer! | API research: → SolidWorks API → Dynamo basics → Script conversion | ☐ Files exchange works ☐ Materials transfer ☐ Scripts explored ☐ Pipeline connected |
| **STEP 10.4: PROFESSIONAL WORKFLOW**  **10. Technical Documentation**  → SolidWorks drawings  → Revit sheets  → Both better than AutoCAD  → Industry loves these  **11. Collaboration**  → SolidWorks PDM  → Revit worksharing  → Version control built-in  → Professional pipeline  **12. Your Portfolio Impact**  → "Proficient in multiple CAD"  → Shows adaptability  → Industry-specific tools  → Major resume boost! | Portfolio prep: → Comparison docs → Workflow diagram → Skills matrix | ☐ Drawings created ☐ Collaboration tested ☐ Portfolio enhanced ☐ Skills expanded |