Part 5: Character Workflow - INSTRUCTIONS FOR MICHAEL

**Follow these EXACT steps to complete Part 5**Time: 3.5-4 hours • Goal: 'I'm Becoming an Artist!'

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| MICHAEL: Do These Steps Exactly | JESSE: Your Support Tasks | ✓ Check When Done |
| **STEP 5.1: HERO CHARACTER**  **1. AutoCAD - Character Sheets**  → Draw figure: 8 heads tall  → Front view: Center line, proportions  → Side view: Profile, depth  → Measurements: Head=22cm, Height=176cm  → Details: Hand size, eye spacing  → Export as character\_blueprint.pdf  **2. Substance - Skin Shading**  → New → Skin material  → Subsurface: Color: RGB(255, 218, 190)  → Subsurface weight: 0.8  → Normal: Pore details  → Roughness: Zones (T-zone oilier)  → Add makeup layers: Optional  → Export as skin\_realistic/  **3. Maya - Hero Modeling**  → Import blueprint as image plane  → Start with base mesh  → Add edge loops: Face=30, Body=20  → Sculpting mode → Smooth/Relax  → Add details: Wrinkles, muscles  → Retopology → Quad draw  → UV unwrap → Unfold → Layout  → Save as character\_hero.ma | Blueprint generator Measurement docs Reference library | ☐ Blueprints done ☐ Skin realistic ☐ Hero modeled ☐ Topology clean |
| **STEP 5.2: ADVANCED FACIAL**  **4. Python - Shot Assembly**  → CSV shot data script: import maya.cmds as cmds import csv with open('shots.csv', 'r') as f:  reader = csv.DictReader(f)  for row in reader:  # Import asset  cmds.file(row['path'], i=True, ns=row['name'])  # Position  cmds.setAttr(f"{row['name']}:root.tx", float(row['x']))  cmds.setAttr(f"{row['name']}:root.ty", float(row['y']))  cmds.setAttr(f"{row['name']}:root.tz", float(row['z']))  # Scale  cmds.setAttr(f"{row['name']}:root.sx", float(row['scale']))  → shots.csv has: path,name,x,y,z,scale  → Run → Assets placed automatically!  **5. Facial - FACS System**  → Create 50 blend shapes:  → AU1: Inner Brow Raiser  → AU2: Outer Brow Raiser  → AU4: Brow Lowerer  → (Continue with FACS list)  → Add correctives: AU1+AU2  → Test combinations  → Save as facial\_FACS.ma  **6. Hair - Style Variations**  → Create 3 styles:  → Long: Length 30, Clump 0.1  → Short: Length 5, Stiff 0.8  → Wet: Clump 0.9, Weight 2  → Save presets → Apply per shot  → Cache each style | CSV pipeline tools FACS documentation Expression library | ☐ Shots assembled ☐ 50 FACS shapes ☐ 3 hair styles ☐ All cached |
| **STEP 5.3: CROWD POPULATION**  **7. Cloth - Wardrobe**  → Model 5 outfits:  → T-shirt, Dress, Suit, Casual, Sport  → Each different cloth settings:  → Cotton: Stretch 20  → Silk: Stretch 50  → Denim: Stretch 10  → Quick selection sets  → Cache all → wardrobe/  **8. Crowds - Festival**  → Import 5 character variations  → MASH → 200 points  → Stadium distribution  → ID node → 5 types  → Assign different textures per ID  → LOD: Distance based  → Cache crowd\_festival.abc  **9. Mocap - Custom Performance**  → Record with phone/webcam  → Or use Mixamo library  → 3-minute sequence  → Clean in MotionBuilder  → Apply to hero character  → Polish: Fingers, eyes  → Export as hero\_performance.fbx | Crowd AI system LOD automation Performance profiler | ☐ 5 outfits ☐ 200 crowd ☐ Performance clean ☐ Festival ready |
| **STEP 5.4: ENVIRONMENT INTEGRATION**  **10. Houdini - Weather**  → Rain: FLIP particles  → Emission rate: 10000/sec  → Gravity: -15  → Add collision with ground  → Splash particles on impact  → Mist: Volume → Noise  → Lightning: L-system  → Export weather.bgeo sequence  **11. V-Ray - Time of Day**  → Create lighting scenarios:  → Dawn: 5600K, Sun angle: 10°  → Noon: 6500K, Sun angle: 80°  → Sunset: 3200K, Sun angle: 15°  → Night: Multiple sources  → Save each as preset  → Render all scenarios  **12. Nuke - Deep Comp**  → Read deep EXR passes  → DeepMerge nodes  → DeepColorCorrect  → Atmosphere: Fog card  → Z-depth haze  → Particles: Plus merge  → Motion blur: Vector blur  → Write: master\_comp.exr  **13. Unity - Character System**  → Import all characters  → Humanoid rig setup  → Animator controller:  → States: Idle, Walk, Run  → Blend trees  → IK: Foot placement  → LOD groups: 3 levels  → Test: 60fps with 200 chars | Weather controller Lighting manager Deep comp setup Character optimizer | ☐ Weather effects ☐ All times of day ☐ Deep comp works ☐ 60fps achieved |

# 🎉 PART 5 COMPLETE!

You've mastered Character Workflow with all 13 tools!