

Ahmed Khalil

BIM Modeler | Automation Strategist | 3D Visualizer

Dubai, United Arab Emirates | Phone: +971 55 288 9433 | Email: archi.khalil.design@gmail.com
Portfolio: www.ahmedkhalil.xyz | YouTube: youtube.com/@pixy.plugin

PROFESSIONAL SUMMARY

Architectural Engineer and BIM specialist with over 3 years of experience in parametric modeling, BIM automation and photorealistic visualization. Builds the Revit family systems and template standards that development teams turn into production automation plugins, and directs AI to produce the supporting Dynamo, pyRevit and Python tooling. Experienced in Revit API content architecture, Enscape rendering, construction documentation, and training design teams to a single standard. Based in Dubai, United Arab Emirates.

CORE SKILLS

BIM and Modeling: Autodesk Revit, Revit API, Parametric Families, Adaptive Components, Shared Parameters, Family Templates, Nested Families, Construction Documentation, Shop Drawings, 2D and 3D BIM Drawings, BIM Coordination, MEP Families

Automation: Dynamo, pyRevit, Python, Revit API Add-ins, Workflow Automation, Template Standardization, Formula and Visibility Logic, Type Catalogues, AI-Directed Development

Visualization: Enscape, Photorealistic Rendering, Texture Authoring, Albedo and Displacement Maps, Material Libraries, Lighting, 3D Visualization

Design: Architectural Design, Interior Design, Landscape Design, Exterior Design, Concept Development, Space Planning

Other Software: AutoCAD, SketchUp, Rhino, Adobe Photoshop, Microsoft Office

Professional: Technical Training, Quality Assurance, Team Leadership, Technical Documentation, Research and Development

WORK EXPERIENCE

R&D Team Member and BIM Automation Strategist

Ducon Industries, Dubai, United Arab Emirates

July 2024 - Present

- Develop advanced parametric Revit families and template workflows that serve as the research and development foundation for developer-built automation plugins, including the Outdoor Kitchen Configurator and Kitchen Counter Generator.
- Direct AI to build a Python texture pipeline generating photorealistic albedo and displacement maps across 5 colourways, calibrated against real product samples at 5.67 pixels per millimetre.
- Lead the Enscape material realism upgrade, rebuilding the entire paver, slab and wall system library from flat placeholder materials to photorealistic quality.
- Direct AI tools to build Dynamo and pyRevit automation workflows that increase BIM productivity.
- Consolidate 20 pergola and 12 fountain model groups into single intelligent parametric families, achieving approximately 95 percent reduction in library clutter.
- Design, visualize and render landscape projects from concept through execution.
- Produce accurate 2D and 3D BIM construction drawings covering planting, grading and layout plans.
- Design and deliver a structured training and quality assurance programme for 8 designers, scored on a 9-point evaluation matrix.

Interior Designer and 3D Visualizer

ASO Engineering, Egypt

December 2022 - June 2024

- Developed interior design concepts with strong functional and aesthetic value.
- Produced high-quality 3D visualizations and photorealistic renders for client presentation.
- Created precise 2D and 3D drawings for documentation and presentation.

Revit Content Creator

Advanced Parametric Modeling Tutorials, Independent

2023 - Present

- Create advanced Revit modeling tutorials that guide and train practising designers.
- Direct AI to produce custom pyRevit and Dynamo tools that improve team productivity.

KEY PROJECTS

Photoreal Texture Pipeline

- Directed AI to build a Python pipeline converting 15 photographs of cast pavers into seamless, validated albedo and displacement maps across two bond patterns, producing 60 apparent variants from 15 source files.

Parametric Electrical Families

- Designed 3 Revit family architectures (standalone host, 5-point adaptive and line-based) absorbing approximately 60 product SKUs across 9 categories as data rather than geometry, documented as a 38-slide technical build guideline.

BIM Workflow Standardization and Template Optimization

- Consolidated a fragmented multi-file BIM workflow into one coordinated Revit template spanning Architectural and Electrical disciplines.

EDUCATION

Bachelor of Science in Architectural Engineering

Faculty of Engineering, Al-Azhar University

2017 - 2022

LANGUAGES

Arabic: Native

English: Advanced