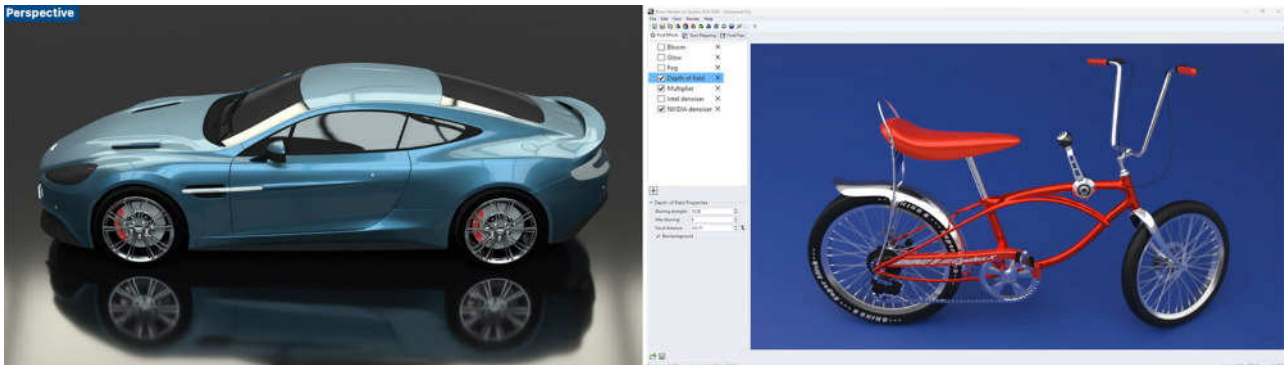# New in Rhino 8

Rhino 8 brings new modeling tools like ShrinkWrap, a huge speed boost for Mac users, simplified modeling workflows, SubD Creases, improved clipping and sectioning tools, a more customizable User Interface, a faster Render engine, new Grasshopper data types, and much more…

Rhino 8 adds dozens of refinements to existing tools and some new ones:

Modeling Simplified: Combine new tools to quickly sketch your idea in 3D.

PushPull: Grab a face and push or pull it, extruding or extending. PushPull speeds up modeling by using curves to add or remove volumes from existing surfaces.

Gumball: The move, scale, rotate widget gets new grips for extending and extruding.

SubD: SubD Creases, great for making fillet-like features.

Surface Fillets: FilletSrf has a new UI with dynamic radius previews.

Offset: Offset can now create multiple closed regions.

Editing complex models in **Rhino 8** is fast and easy:

Gumball: The move, scale, rotate widget gets new grips for extending and extruding.

Auto CPlanes: Smarter CPlanes automatically align to eligible selections.

Improved Mesh Booleans: Completely rewritten and more reliable Mesh Booleans.

RefitTrim: Take control of structure and continuity for well-made surface models

Rhino 8's User Interface is far more customizable, even on Mac, with:

Window Layouts: Customize, save, share, and restore your favorite interface layouts.

Layer Manager: A complete rewrite, on Windows and Mac, including all new features.

Blocks: The Block Manager is now more flexible and powerful.

Surface Fillets: FilletSrf has a new UI with dynamic radius previews.

New in **Rhino 8**:

Metal: Blazing fast 3D drawing on **Mac**.

New Display Mode: Monochrome, a clean, minimal look, perfect for showcasing architectural work.

New in **Rhino 8**:

Rhino Render: We've updated the Cycles engine for faster, GPU-accelerated raytracing.

UV Mapping: UV Mapping has been improved with a floating UV Editor, new unwrapping algorithms, pinning and a better texture quality in the display.

Procedural Textures: Native, per-pixel procedural textures in raytraced and rendered modes.

Display Modes: Monochrome, a clean, minimal look, perfect for showcasing architectural work.

In **Rhino 8**, we've added…

Linetypes: Draw stylized curves with pattern, width and taper to communicate design or artistic flair.

Reflected Ceiling Plans: A reflected parallel projection viewport mode, perfect for RCPs.

Dynamic 2D Drawings:

Section Styles: Clipping planes and section styles give more control when using clipping planes.

In **Rhino 8**, try out…

ShrinkWrap: ShrinkWrap creates a watertight mesh around open or closed meshes, NURBS geometry, SubD, and point clouds: ideal for creating meshes for 3D printing.

Sectioning for Fabrication: Support for extracting curves, hatches, surfaces and slices of clipping planes.

In **Rhino 8**, test out…

Improved Mesh Booleans: Completely rewritten and more reliable Mesh Booleans.

ShrinkWrap: ShrinkWrap creates a watertight mesh around open or closed meshes, NURBS geometry, SubD, and point clouds: ideal for creating meshes for 3D printing.

New in **Rhino 8**:

Curvature Analysis: Now supports SubDs.

Draft Angle Analysis: Allows using Named CPlanes, a smarter CPlane Z option and automatically sets direction when switching options.

Point Deviation: Now supports SubDs and shows red numbers when invalid distances are entered.

In addition, **Rhino 8** now supports:

USD Export: Universal Scene Description, an extensible format commonly used in visualization applications.

GLTF Import/Export: GL Transmission Format, useful for sharing 3D models on the web using WebGL.

Improved support for many formats.

New in **Grasshopper 1** in **Rhino 8**:

Object Attributes: Manage Rhino object attributes directly from Grasshopper.

Annotations: Document your design with Grasshopper's annotation, hatch, and linetype components.

Blocks: Create block definitions and instances in Grasshopper.

Live Baking: Live update existing Rhino objects from Grasshopper.

UserText: Add, modify, or remove user text from any Rhino object.

And more...

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Krimson d.o.o., Ljubljana, Slovenia, https://www.krimson.si/

Based on info from:
https://www.rhino3d.com/features/#overview