

Using iLogic with Design Automation for Inventor to create a Configurator

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About the speaker

Sajith Subramanian

A qualified software engineer with over a decade of development experience with various CAD tools, he is part of the Manufacturing team at Autodesk, supporting and evangelizing API's for Inventor, Fusion and Vault.

Now an evangelist and an enthusiast on the Forge platform, he has published various code samples showcasing the combined use of desktop product API's with our Forge platform.

Class summary

Inventor Design Automation, in general, allows the use of Inventor API's to be executed in the cloud, like how they would work on the desktop, but without the need of any installed software or its dependent licenses.

An additional advantage of Inventor Design Automation, which may be easily overlooked, is its capability to run iLogic scripts in the cloud. These scripts being embedded in the CAD file itself can be programmed to auto execute under certain conditions.

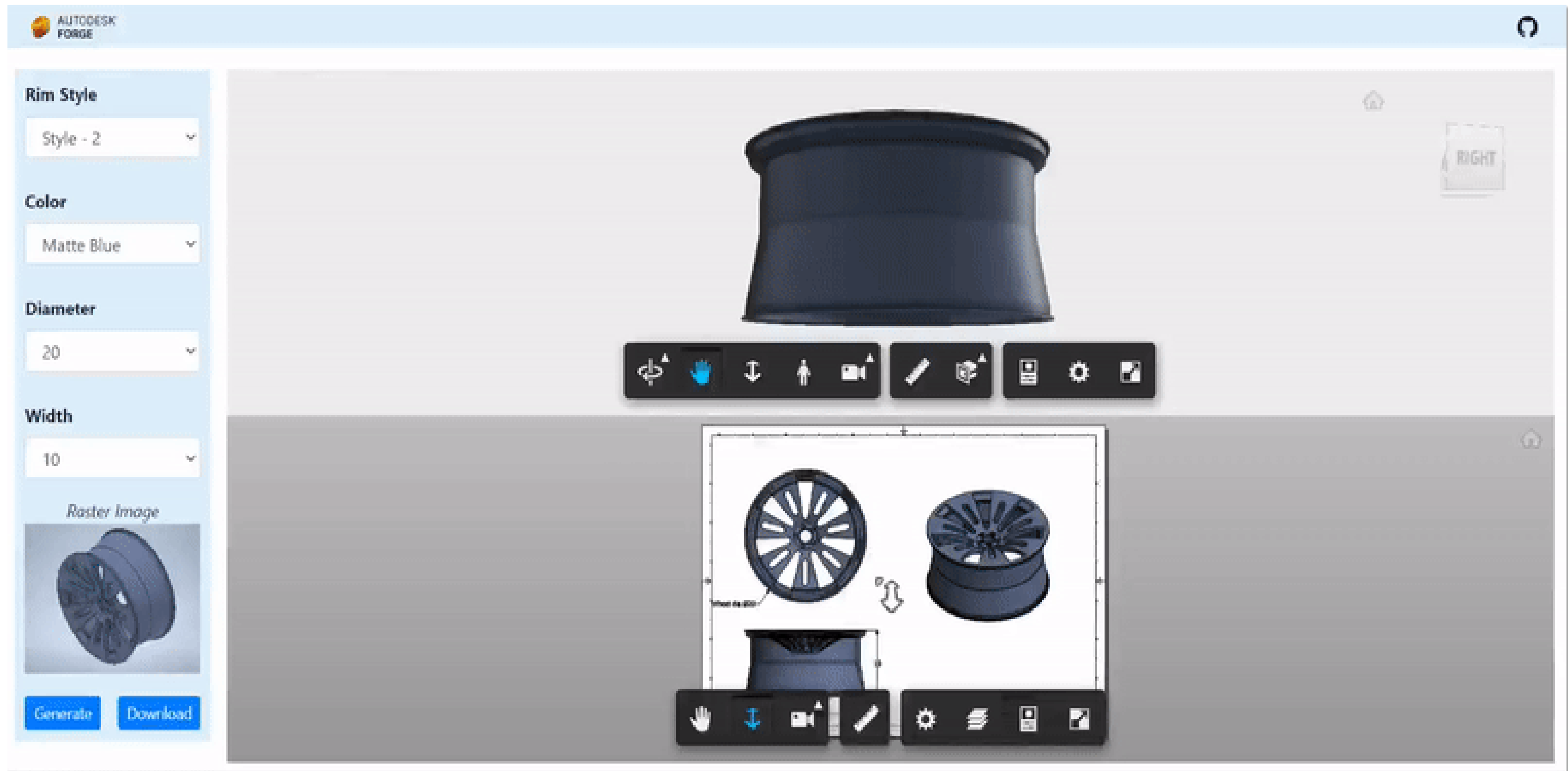
This class speaks about taking advantage of this capability to combine Forge Design Automation with iLogic, creating a configurator by modifying an input Inventor File (IPT) in the cloud, using a web browser, according to the inputs provided by the user on an easy-to-use UI. The results can be immediately viewed on the browser itself, using the Forge Viewer and can also be downloaded in multiple formats such as IPT, IDW, and PDF.

Key learning objectives

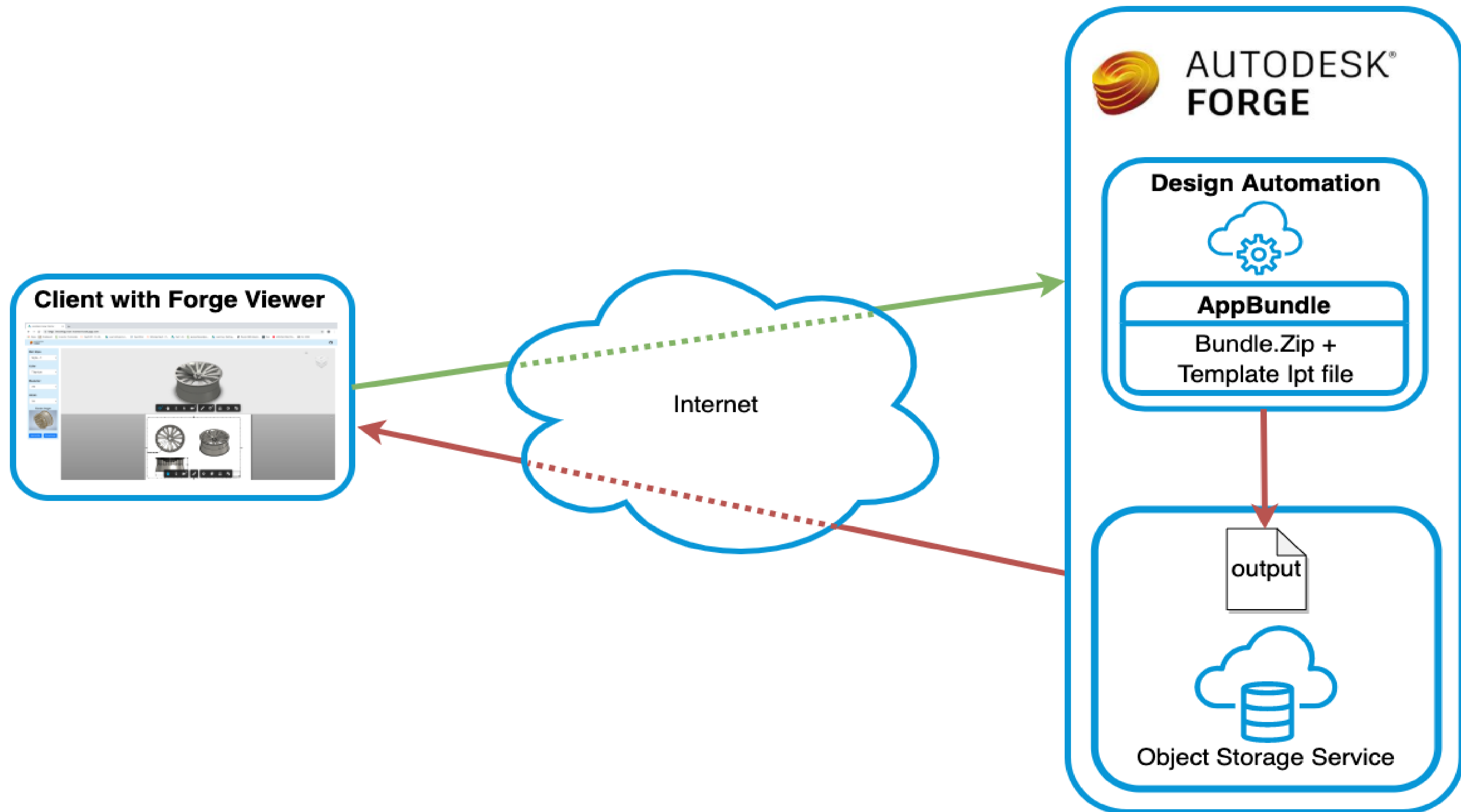
At the end of this class, you will be able to:

- Create a web application that uses Forge Design Automation for Inventor that runs on a web browser without having the need of having locally installed software.
- Experience the added advantages of being able to run iLogic in the cloud.
- Immediately render and view the resulting output using the Forge Viewer.
- Drive dependent file formats like IPT, IDW and PDF.

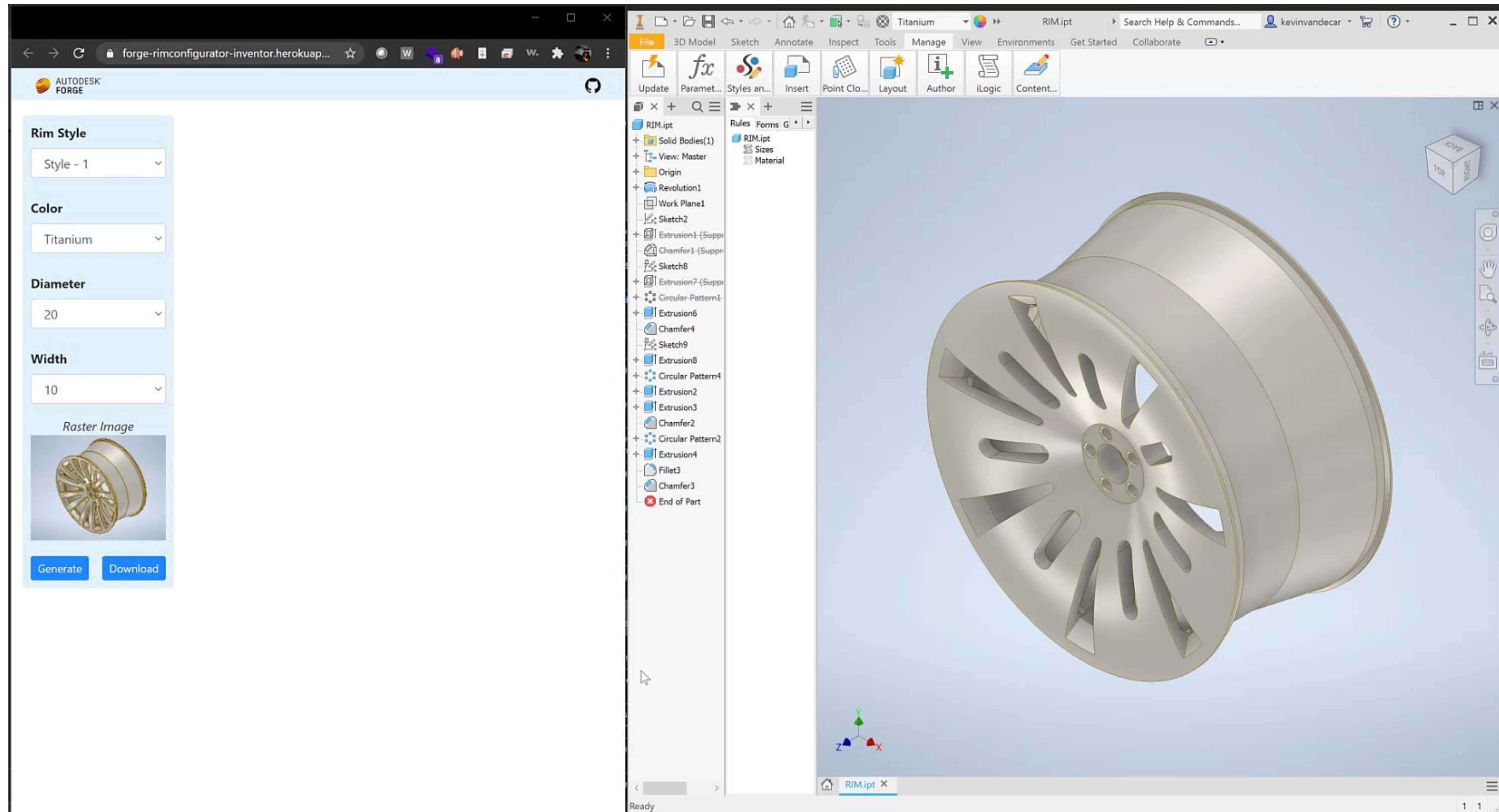
Live Demo



Overview of the application



The desktop side of things!



Preparing your inputs

- PREPARING THE INVENTOR PLUG-IN
- PREPARING THE INVENTOR TEMPLATE FILE
EMBEDDED WITH iLOGIC





Preparing the Inventor Plug-in

- The plug-in refers to Inventor API code (like the plug-in which you use for Inventor desktop application) that you would want to execute in the cloud using Design Automation.
- It is recommended to use the Design Automation template for creating the plug-in project.
- The output of this project would be a zipped folder containing the resulting files – known as an AppBundle.

The image shows two overlapping windows from the Visual Studio environment. The top window is the Visual Studio Marketplace page for the 'Design Automation for Inventor' extension by Autodesk. It displays the extension's icon, name, publisher, install count (1,268), download count (1,357), and a 'Download' button. The bottom window is the 'Extensions and Updates' pane. It shows a list of installed and online extensions. The 'Design Automation for Inventor' extension is highlighted in blue. To the right of the extension list, a detailed view for the selected extension is shown, including its version (1.0.1), download count (1227), and rating (0 votes). At the bottom right, there are sections for 'Scheduled For Install:', 'Scheduled For Update:', and 'Scheduled For Uninstall:', all showing 'None'.

Visual Studio | Marketplace

Visual Studio > Templates > Design Automation for Inventor

Design Automation for Inventor
Autodesk | 1,268 installs | 1,357 downloads | ★★★★★ (0) | Free
Design Automation for Inventor
[Download](#)

Extensions and Updates

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Sort by: Relevance

Forge

Mobioos Forge Studio (BETA)
FORGE by Mobioos® enables you to design your app (architecture and requirements) and it automatically self-genera...

Missing await warning
Gives a warning when an asynchronous method might be inadvertently used as a fire and forget method (also in cases whe...

CSS AutoPrefixer
Write your CSS rules without vendor prefixes (in fact, forget about them entirely). Autoprefixer will use the data based on current br...

Codealike
Have you ever wondered how much time you spent debugging? Automatically track everything you do when you code. See repo...

Design Automation for Inventor
Design Automation for Inventor
[Download](#)

Created by: Autodesk
Version: 1.0.1
Downloads: 1227
Rating: ★★★★★ (0 Votes)
[More Information](#)
[Report Extension to Microsoft](#)

Scheduled For Install:
None

Scheduled For Update:
None

Scheduled For Uninstall:
None

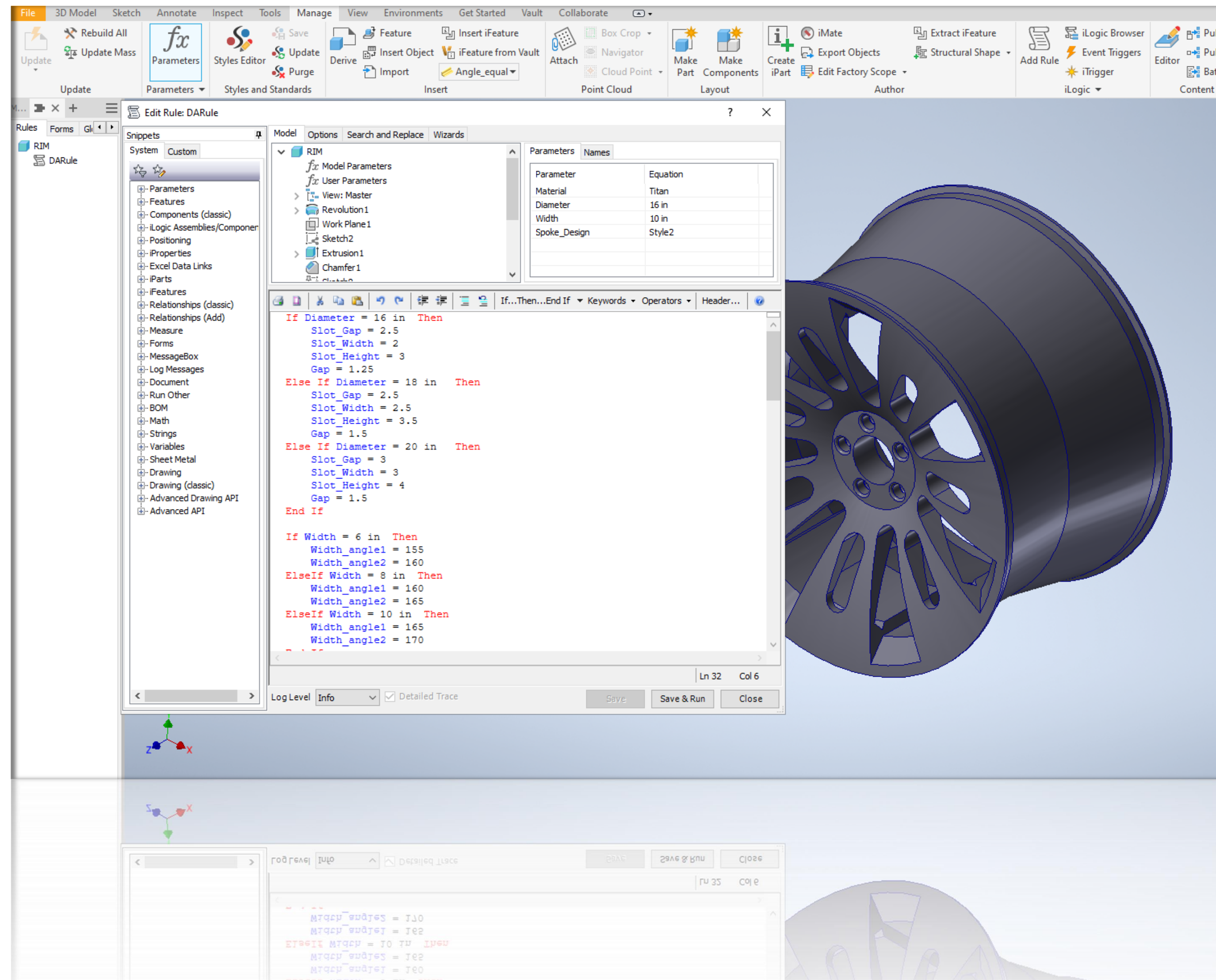
1

[Change your Extensions and Updates settings](#)

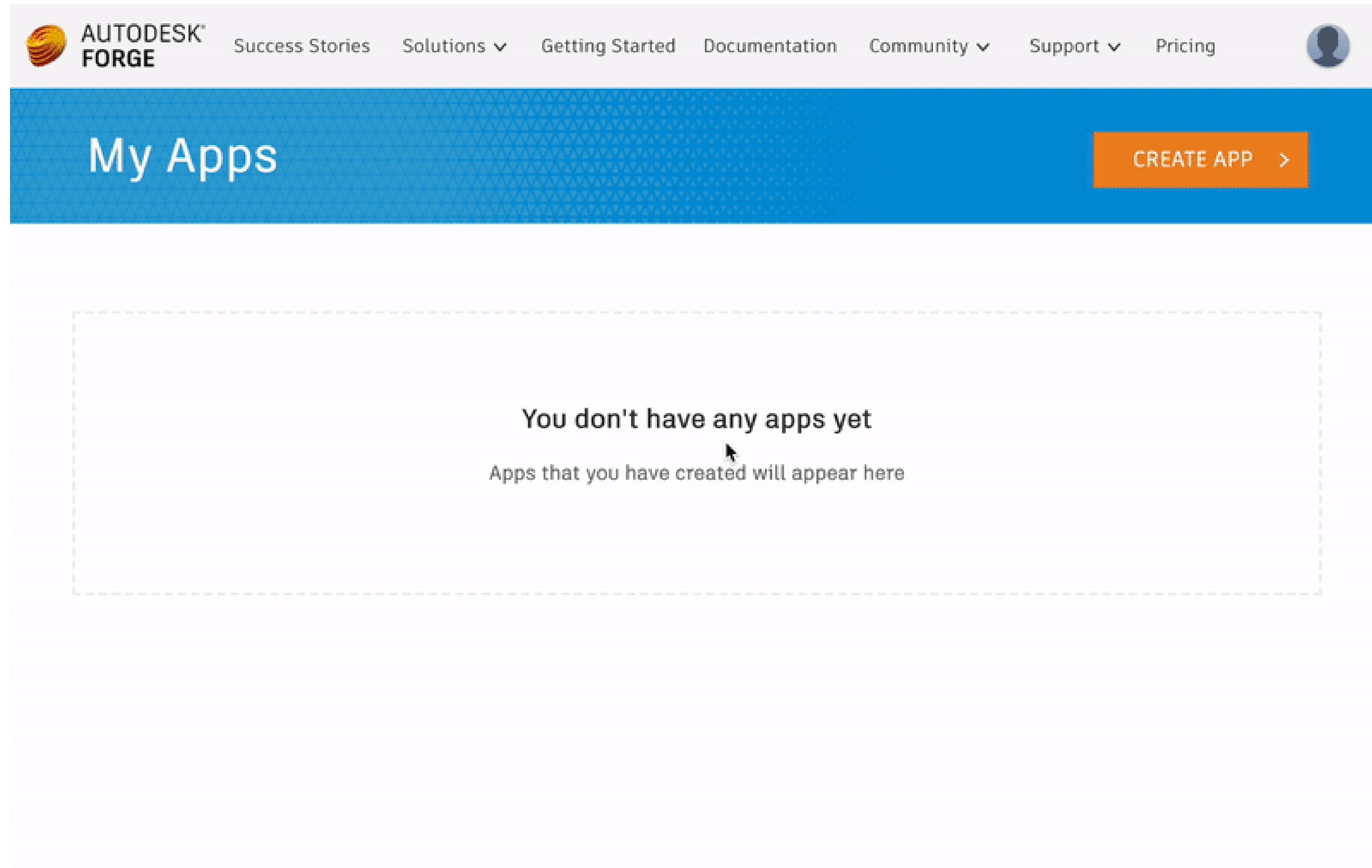
[Close](#)



Preparing the Inventor template file & adding iLogic



Prerequisite: Creating an app



Diving into the Code!



Source: Pixabay

Tips & Tricks!

The tips & tricks that were used in this application are from the below blog posts:

- <https://forge.autodesk.com/blog/selection-override>
- <https://forge.autodesk.com/blog/store-template-documents-appbundle>
- <https://forge.autodesk.com/blog/i-make-changes-and-nothing-happens>

May the source be with you!

The full source code of this application can be found on GitHub:

<https://github.com/sajith-subramanian/forged-rimconfigurator-inventor>

The application is hosted on Heroku and can be accessed here:

<https://forgerimconfiguratorinventor.herokuapp.com/>

Additional Resources

- **Forge:**
 - Forge Blog: <https://forge.autodesk.com/blog>
 - Learn Forge (Getting started): <https://learnforge.autodesk.io/#/?id=learn-autodesk-forge>
- **Inventor:**
 - MFG Dev Blog: <http://adndevblog.typepad.com/manufacturing/>
 - Mod the machine blog: <http://modthemachine.typepad.com/>
 - Inventor customization forum: <https://forums.autodesk.com/t5/inventor-customization/bd-p/120>



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