FORGE®

Using the Python API to Automate Data Processing and Analysis with FORGE®

Would you like to increase your productivity? Get to know the tools available for automating data preparation and result analysis.

The time you spend creating simulation projects and analyzing calculation results is often significant. The Python API can help you to reduce the time you spend on these repetitive tasks.

Python scripts will enable you to create projects, run calculations, and analyze results with maximum automation. Specifically, you'll be able to create your own custom processes, manage your objects, import and generate meshes, define all types of parameters, automatically generate calculation variants, display only the results you need in the optimal configuration, export your results, and much more. This new feature offers numerous advantages: time savings, automation, project security, and interconnection with your other digital tools.

Whether you wish to automate all or part of your operations, define static or dynamic data, or even call a third-party application from FORGE®, everything is possible and imaginable. This training is made for you!

LEVEL

Intermediate

PREREQUISITES

- **Have some experience with TRANSVALOR software. You should be familiar with using the NxT interface.**
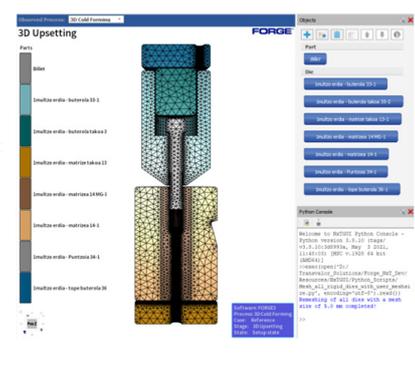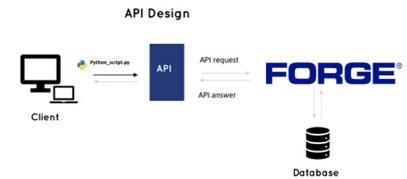- **Have basic experience in coding with the Python language.**

GOALS

- **Discover what the Python API can offer you in terms of automation.**
- **Take advantage of the new interface features to speed up data preparation and result analysis.**

TRAINING	DURATION	PRICE EXCL. TAX	PARTICIPANTS
In-company	2 days	€2800 per training	1 to 3 people

DAY 1 > 8:30 a.m. to 12:00 p.m. & 1:30 p.m. to 5:00 p.m.

Introduction	▪ Presentation of Transvalor ▪ Training objectives
Why this API?	▪ Context ▪ Previous tools made available ▪ Prerequisites ▪ Current limitations ▪ Perspectives
Structure of Scripts	▪ How the Python console works ▪ Vocabulary (concepts of classes, functions, and arguments) ▪ Links between various objects, simulations, attributes, properties
Data Preparation Scripts	▪ Understanding existing scripts ▪ Working on a complete data preparation script ▪ Coding your own data preparation script
Analysis Scripts	▪ Understanding existing scripts ▪ How to adapt them to your needs? ▪ Coding your own result analysis script
Documenta-tion	▪ Explanation of the documentation available to code your own data preparation and analysis scripts ▪ Python Help

DAY 2 > 8:30 a.m. to 12:00 p.m. & 1:30 p.m. to 5:00 p.m.

Hands-on Practice on Data Preparation Automation	▪ Definition of the problem and the steps to automate ▪ Creation of the automation script
Hands-on Practice on Result Analysis	▪ Description of the analysis steps ▪ Creation of the automation scripts
Perspectives	▪ What possibilities are there for going further and fully automating data preparation and analysis? ▪ Variable parameters, custom interfaces, command-line execution
Conclusion	▪ Various questions and training evaluation