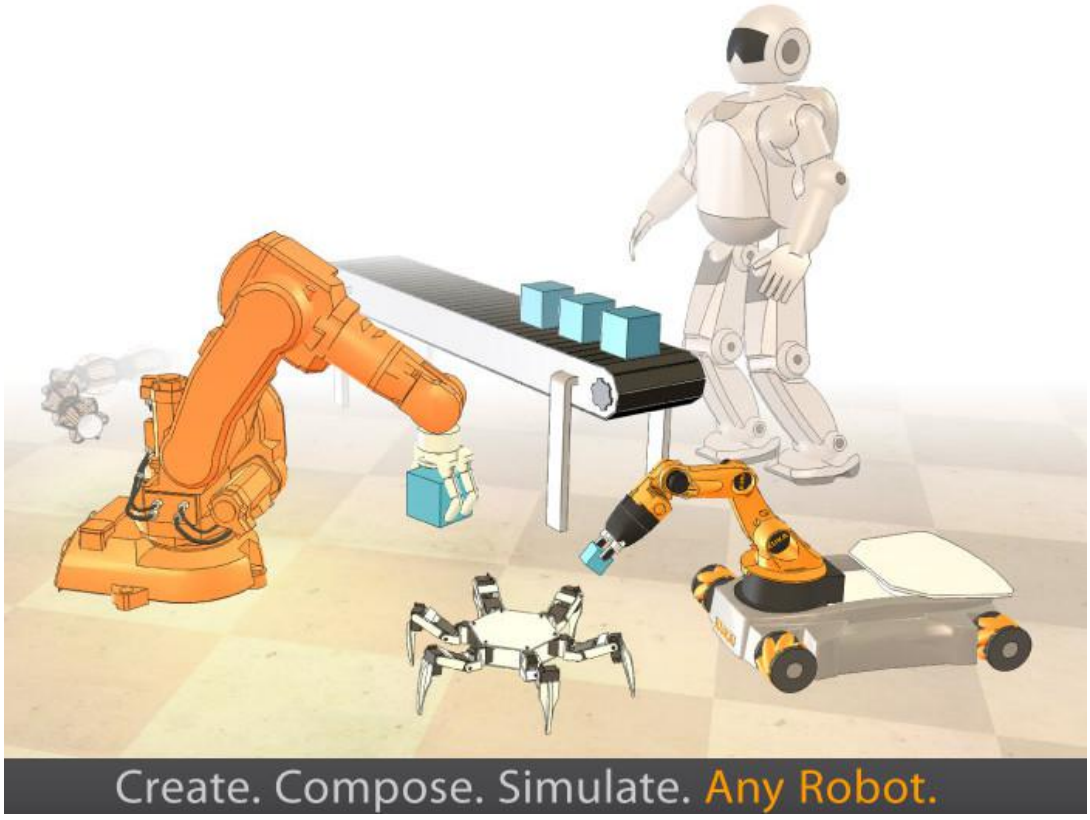
Getting Started with V-REP

Simulation software in Robotics helps in reducing the risk of hardware issues, facilitates implementation of systems by easily varying geometry, sensor modules, design and what not. Some of the simulation software[1] for Robotics include Gazebo simulator, Blender, V-REP.

Designed by Coppelia Robotics, V-REP is an advanced 3D simulators for industrial robots. The tool offers support for a wide range of programming languages including C/C++, Python, Java, Lua, Matlab or Urbi. It has support for developing algorithms to simulate automation scenarios, the platform is used in education as well as by engineers for remote monitoring or safety double-checking.

Virtual Robot Experimentation is versatile mainly because of the flexibility in the usage of remote APIs for programming, extensive model database and the availability of many basic and advanced modules with easy-to-use user interface.



The Following are just a few of V-REP's applications:

- Simulation of factory automation systems
- Remote monitoring
- Hardware control
- Fast prototyping and verification
- Safety monitoring
- Fast algorithm development
- Robotics related education
- Product presentation

Tutorials:

- Watch this video tutorial to understand the basics of V-REP. This video tutorial gives you basic ideas of the following topics:
  - Basic simulation elements in V-REP
  - Scenes
  - Models
  - Scene objects
  - Translation and rotation of shapes
  - Calculation Modules
  - Child and Main Script
  - Simulation settings
- You can learn the concepts in detail from the V-REP User Manual
- V-REP also provides many tutorials to learn different concepts.

Good Luck!