



# Machine learning development internship – morphology scaling

Simbeyond accelerates development of advanced materials and high-tech devices as used in state-of-the-art display, lighting and signage applications. We provide unprecedented software tools for the development of organic electronic devices, such as OLEDs, that replace a large part of the costly and time-consuming experimental efforts with computer simulations. The unique approach provided allows our customers to analyze, predict and improve device performance. This leads to a shorter time-to-market and to reduced R&D costs for the electronic devices of today and tomorrow.

## Your tasks:

Simbeyond is offering you an internship in the field of machine learning (ML). The project involves scaling virtual material morphologies. Given a small sample of a virtual material morphology, the ML model(s) should be trained to create a larger morphology while retaining the properties including the spatial structure and correlations of the material. The project includes the following tasks:

- Obtain and prepare datasets that cover the input domain
- Research the feasibility of ML models for spatial analysis, e.g. CNN, RNN, GAN
- Implement the ML models using e.g. Python Tensorflow or Keras
- Validate the approach using the Simbeyond simulation environment

## Your background:

You are pursuing a bachelor or master degree in Computer Science, Physics, Chemistry or a related field at HBO level or higher and have affinity with ML and data analysis, as well as physics/chemistry. We expect you to have basic knowledge and experience with Linux and Python. Flexibility, excellent organizational and communication skills are required, as well as a quality mindset and good problem solving skills. You should be fluent in English, both in written and verbal form.

## Our offer:

We offer you an exciting opportunity to join a young and dynamic start-up company in Eindhoven, the Brainport of The Netherlands. You will work in a team of driven professionals with various backgrounds and have the opportunity to gain real-life experience with other topics like web development, cloud computing and cybersecurity. Our informal company culture gives ample opportunity for both personal and professional development. At the same time, you will be helping to shape our fast growing business. Are you the new team member we are looking for? Send your CV, list of marks and motivation letter to [jobs@simbeyond.com](mailto:jobs@simbeyond.com). For more information, visit [simbeyond.com](http://simbeyond.com).