ECAADE 23 WORKSHOP 'ARTIFICIAL ARCHITECTURAL INTELLIGENCE'

Build & Train Your Own 3D AI-Generative Design Tool

18. & 19.09.2023 DigitalLab

(en) *This workshop will explore methods of creating a custom, large-scale 3D dataset usable to train one's own generative deep neural network. To do so we will use state of the art 3D parametric software tools (Grasshopper/ Houdini FX). We will use these datasets to train our own generative deep learning neural network ArchiNET. At the end participants will have trained their own custom AI based design tools which will be able to synthesize new 3D outputs.*

Part 1: Generation of custom datasets:
We will be using parametric design tools to create custom datasets usable to train our own generative deep learning network. Workshop participants will first learn about important principal regarding the training of neural networks and the creation of adequate datasets (for example usable 3D data representations). Each workshop participant will create their own unique dataset. We will combine those individual datasets and use those to train neural networks. The trained network will be based on the PyTorch deep learning library and will be able to generate hybrids and complex combinations of those individual datasets.

Part 2: Training the neural network and generating new outputs:
The combined datasets will be used to train our own ArchiNET. After training the participants will learn how to generate new output and convert their generated output back into 3D mesh data. Participants will be encouraged to explore different dataset combinations and investigate their resulting generative outputs.
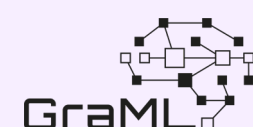
more information on: https://ecaade2023.tugraz.at
registration via email: sebestyen@tugraz.at
registration deadline: 31.08.23

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+ *Workshop eCAADe 2023*
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GraML   I OI III

Institute of Architecture and Media
Institute of Theoretical Computer Science
GraML : Graz Center for Machine Learning