







about

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Rotbuchstrasse 34, 8037, Zürich, CH
 Schoonmeersstraat 29, 9000, Gent, BE

skills

soft

languages

English-C1 German-B2
 French-B2 Dutch-C2

digital

programming

Python: numpy, pandas, shapely, ifcOpenShell,
 keras, tensorflow, sklearn (MLP, LR, SVM),
 opencv (pix2pix, StyleGan), GeoPython,
 COMPAS, ghPython, Blender, flask
 Java: JTS, gradle, AWT, Spring (Boot)
 C#: rhino common, Unity
 GLSL: shadertoy, webGL
 js: Node.js, React, threejs

UR-script, bash, GCode, html, css

development

PyCharm, IntelliJ, Visual Studio, VSCode, Docker
 Git (Github + Bitbucket), Asana, Paperspace, Colab

caad

Rhino, Grasshopper (+plugins), keyshot, Blender,
 AutoCAD, ArchiCAD, Revit, qGIS, Processing

tool design and prototyping

Arduino (GRBL), ABB-robot-suite, Prusa Slicer
 Autodesk Fusion, Cura, ideaMaker, infrared sensors

office & presentation software

Illustrator, Photoshop, InDesign, GIMP, Inkscape,
 Affinity Designer, Bostrap Studio
 Google suite, iWork suite, Office suite

developer
 computational designer

additive manufacturing
 architect

education

ETH Zürich
 Zurich, CH - 2018-'19

Beaux-Arts Gent
 Gent, BE - 2016-'17

TUM
 München, DE - 2015-'16

UGent
 Gent, BE - 2014-'17

UGent
 Gent, BE - 2010-'14

master in advanced subject
 digital fabrication

vocational bachelor
 sculptural ceramics

master in architecture
 architecture & urban design

master of science in engineering
 urban design

bachelor of science in engineering
 architecture

experience

UGD gmbh
 full-stack and POC developer
 (2020 Q1 - now)

stoHome (POC)
using CityGML datasets, point cloud scans and pictures with machine learning models (such as LR, MLP, pix2pix, SVP) for accurately reading and predicting wall surface area compositions of houses in the context of UGDs remodelling tool stoHome (core-tech: react, tensorflow, threejs);

Digitale Augen (POC)
tool for simulating and quantifying human perception of architecture through vector math using cloud scans analysis and computer vision techniques in the context of UGDs project Digital Augen, prototyped with gh C# components and ported to Unity using shaders and OpenCV. (core-tech: OpenCV, RhinoCommon, HLSL)

Haworth CoDesigner
Evolutionary Algorithm based automatic planning tool for American furniture company Haworth. Built a lightweight CAD database using the JTS framework for a cloud based 2D drawing tool. developed and implemented various space syntax algorithms for interior and urban space analysis; worked on reading out and communicating with infrared sensors for anonymous space occupation analysis

HTWG Konstanz
 Lecturer Computational Design
 (Sommersemester 2021)

NATURE OF THE ARTIFICIAL
Advanced grasshopper and explorative python scripting course for Master Students using Rhino & Google Colab.

rrreefs
 design and fabrication strategy
 developer (2019 Q4 - now)

Coral Voxels
concrete binderjetted continuation of the Modules project with SDF based designs. In collaboration with Netherlands based 3d printing engineer Nadia Fani. Funded by an European Horizon 2020 Grant.

Modules
Maldives/Columbia - preservative art - 3d printed clay structures that keep corals thriving despite rising ocean temperatures and acidification. Test in maldives, real prototype will be installed in San Andrea, Colombia summer 2021. Funded by crowdfunding on WeMakelt & ETH Library Lab.

skills

Archilyse AG

POCs and QA 2019 Q4 - '20 Q1)

Proptech KPI & Digitization (POC)

Building POCs for solving topological issues in mesh divisions with shapely, IFC handling using ifcopenshell.

guerrillia beehive

freelance (2018 Q3 - '19 Q2)

Elbe Bienen

Hamburg / Brussels - 21st century beehive blending biology, informatics to help curb mass starvation due to air pollution. Design made for Brussels based artist Anne-marie Maes, funded through Hamburg Machine. In collaboration with Die Angewandte Wien. Funded by Flemish Government and Hamburg Stadskuratorein.

analogue

ceramic

From turning table to slip casting & glazing.

glass

Fusing of glass, both manual and robotic artefacts.

modelbuilding

Both by hand as using lasercutting, cnc, 3d-print, UR-robot. Experience with many types of paper, woods & ceramic materials.

3d printing

FDM, sand binder-jet, glass, clay, concrete, chocolate, sugar

bedside table lamps

freelance (2018 Q1 - '20 Q1)

variety of buildings in Europe:

Boekentoren - Gent, BE

MAS - Antwerpen, BE

Anitkabir - Istanbul, TR

Quadrato della Civiltà - Rome, IT

modelbuilder

freelance (2013 Q2 - '19 Q3)

variety of competition models for firms in BE:

L.U.S.T - architecten

Dierendonck-Blancke architecten

Stephane Beel architecten

Architectuur Atelier Ambiorix

Poot Architectuur

Museum M - Leuven

junior architect

b-architecten (2017 Q2 - '18 Q3)

Mundo-A

planningphase and construction site management for ecological office building constructed out of CLT (ARC19 Architecture Award, winner)

Pelikaanstraat

masterplanning project for high rise development in the area of Antwerpen Centraal

Turnova

masterplanning and heritage concept for a highrise development on a brownfield of historic significance in the city of Turnhout

freelance (2018)

Frietskot

Participated on the Frietskot competition for a new iconic frying house for Brussels, sending in an out of CLT constructed proposal inspired by Expo '58 Philips pavilion and the typical Belgian "Frietzak" for which we received an honorary mention.

others

Prizes

2021 - (rrreefs) Hochparterre Goldener Hase

2021 - (rrreefs) Zurich Deutschland - Planet Hero Award

2021 - (rrreefs) Julius Bär Audience Award & Impact Award

2019 - (B-architecten) ARC19 sustainability for Mundo A

2018 - Frietskot, honorary Mention

2020 - Caadria 2020 - Robotic Color Grading for Glass

2018 - Gentenaar - Jonge Gentenaar creert lamp reproductie van Boekentoren

2020 - Neural Style Transfers for Urbanism, taught by Alexandra Carlson & Matias del Campo

2019 - Preparing and building with rammed earth, taught by Ken De Cooman

Publications

Extra Curricular