

Penn Ryan

+44 07446192817 - pennhelaryryan@gmail.com - London-based Biodesigner

SKILLS

Rhino - Grasshopper - Autodesk Fusion 360 CAM - Autodesk CFD - Blender - Delta WASP 2040 Clay - Kuka Robots - CNC - Formech vacuum former - Piranha Laser Cutters - MakerBot printers - Power tools - Cura - HTML - Python - Member of improv comedy team at the Free Association theatre

EDUCATION

Bartlett School of Architecture, University College London **MArch Bio-Integrated Design** *October 2021 - June 2024*

Installed M.Arch. Bio-Integrated Design Bartlett Prospective exhibition during summer 2024. Built and painted shelving units and displays for work from over 30 students displayed in the Bartlett School of Architecture.

Led fabrication of 1:1 scale mycelium panels designed to use bioremediation to collect air pollution from the London Underground using CNC milling, vacuum forming, and CAM within Autodesk Fusion 360. Mycelium panels collect 206.45% more particulate matter (PM2.5) than N95 masks.

3D printed hydrogel forms with living bacteria that emit VOCs responsible for petrichor scent which improve well-being in indoor environments utilizing Delta WASP 2040 clay printer, Kuka KR6 robotic arm and a custom extruder to fabricate designs prepared in Grasshopper. GCODE was generated with Bartlett plugins.

Lawrence University, Appleton, Wisconsin **BA in Fine Arts (Sculpture)** *September 2014 - June 2018*

Edward Byers Fund for Art and Art History Grant to study design and manufacturing in Shenzhen, China - \$2,000 (maximum funding) Resulted in exhibition of 3D printed original work designed in Fusion 360, fabricated with Ultimaker 2+ printers.

Art Department Summer Research Grant working as a studio assistant to nationally recognized artist Rob Neilson. Band saws, mitre saws and other power tools were used to fabricate MDF sculptures installed in galleries and public spaces.

EXPERIENCE

Phyta Biodesign **London, England, UK**
Digital Fabrication & Computational Design Lead *Oct. 2024 - Present*

Developing scripts to use environmental and species data to inform the design of a 3D printed ceramic facade system

Fabrication of 3D printed ceramic facade systems and structural supports for five installations across London

Lead fabricator of a 10 square meter installation of mycelium panels to be installed in the AIA headquarters in Washington D.C.

Teaching Assistant Program in France **Le Port, Reunion Island - Nantes, Pays de la Loire**
English Language Teaching Assistant *Oct. 2018 - May 2019* *Oct. 2020 - May 2021*

Taught English classes at two high-need elementary and middle schools

Created six months of curricula that use theater and movement as a pedagogical tool

Senfablab*Makerspace Educator***Dakar, Senegal***Nov. 2019 – Feb. 2020*

Trained 30 high school students and teachers in digital manufacturing software and hardware using FDM printers

Created proposal for educational syllabi to be funded by Orange Group

Le Château Cultural Center & Diagn'Art Hip-hop Festival*Artist in Residence***St-Louis, Senegal***Oct. 2019*

Exhibited new work in an installation to an international audience of over 50 people

Collaborated with artists at Ndar Urban Week hip-hop festival to create a mural and flash mob, included outreach with two student groups