

Dominic Lim Co

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EDUCATION

MIT (USA) - Dual MS- Computer Science and (SMArchS) in Computational Design 2022-2024 (Expected) | USA

- 6.7900: Machine Learning, 6.S980: Machine Learning for Inverse Graphics, 6.C85 Data Visualization

University of Hong Kong - B.S. Computer Science and B.A Architecture 2015-2019 | Hong Kong

WORK/PROJECT EXPERIENCE

Software Engineering Intern, Samsung Design Innovation Center 06.2023 - 08.2023 | San Francisco, USA

Samsung Design Innovation Center, San Francisco, California

- Developed topological optimization software and workflow using TOPOPT and Abaqus FEM results for 3D printing custom earbud designs which reduced material usage by 78%.
- Automated 3D scanning and point cloud processing workflows to clean and extract biometric data and usable CAD models from a database of hundreds of messy 3D body part scans using programming tools (structured light scanning, Python, Meshroom, Grasshopper, Trimesh, PointNet++) which expedited the mesh cleaning process from 1 hour per mesh to just a few seconds.

Computational Designer/Production Manager, Archireef Abu Dhabi 12.2021 - 12.2022 | UAE & Hong Kong

Archireef (archireef.co): 3D Printing Artificial Coral Reefs, Hong Kong

- Programmed parametric and procedural algorithms for biomimetic artificial coral reef form toolpath generation in Python/Grasshopper for clay 3D printing which expedited printing of our coral units by 50%.
- Collaborated with a multidisciplinary team of engineers and marine scientists in the design and deployment of 3300 sqft of modular artificial reef units across Hong Kong and Abu Dhabi, which resulted in a 99% coral survivorship rate, and was featured on CNN, the World Economic Forum and DesignBoom.

Research Assistant, Dr. Jeanne Tan's Smart Textile Design Lab 12.2020 - 11.2021 | Hong Kong

Institute of Textiles and Clothing, Hong Kong Polytechnic University

- Developed a human centered design and STEM workshop that engaged over 500 secondary school students across Hong Kong, which resulted in a subsequent government grant to continue the project. (dstem.net)

Robotics Research Assistant, Robotic Fabrication Lab 06.2019 - 02.2020 | Hong Kong

Faculty of Computer Science and Architecture, University of Hong Kong, Hong Kong

- Developed Grasshopper software plug-ins for robotic arm manipulation using HAL Robotics Platform for 3D printing, which is used for robotic arm programming teaching classes today.

AWARDS

- 1st Place - MIT Energy Hack '22** for "Pacer: a planning tool for energy retrofits" - Role: UX/UI Designer
- 1st Place - Amazon Web Services: Hack The Orbital Reef Space Station '22** for "Waste Management System"
- 1st Place - Bose Challenge @ MIT '18** for "Runner's High: Audio AR Pace Tracking App" - Role: UX/UI Designer
- 2023-2024 Legatum Fellowship Scholarship for Entrepreneurship**

ACADEMIC PUBLICATIONS

- Co, D. & Chen, A. Procedural Knit: Exploring Underdetermined Fabrication via Knit, Procedural Generation and Posture Detection. IASDR 2021. Hong Kong (Accepted 09/14/21 and In Press)
- Chen, A. & Co, D. Workshops in TEI: Development, Evaluation, Exploration and Implementation. Tangible, Embodied Interfaces 2022 Daejon, South Korea (Accepted 11/18/21)
- Lange, C., Ratoi, L. & Co, D. Reformative Coral Habitats - Rethinking Artificial Reef structures through a robotic 3D clay printing method. CAADRIA 2020. Bangkok, Thailand

SKILLS

Programming Languages: Python (TOPOPT, Gurobi, Pandas, Numpy, etc.)

Programming Software: PyCharm, Visual Studio, Anaconda (working with environments), Jupyter Notebooks

CAD Software: Rhino, Grasshopper, AutoCad, Meshlab, Meshroom, Adobe Suite (Photoshop, Illustrator, ID, etc.)