Ong Guo Xiang

DESIGNER. ARCHITECT. RESEARCHER.

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I am a Research Assistant with the National University of Singapore, Department of Architecture since July of 2019. Prior to this, I had spent 2 years working as an Architectural Associate in Singapore, taking on both project management and design roles.

WORK EXPERIENCE

Research Assistant

National University of Singapore — Jul 2019 – Present

I process videos and images using Machine Learning models and conduct analysis on the data.

Project: Measuring Physical Profile and Use of Park Connector Network with Deep Learning and Multi-Source Multi-Modal Data Analytics

- Set up and maintained the software and hardware environment to perform object and action detections using Machine Learning models.
- Adapted python scripts from an open sourced research on real time action detections to work on large numbers of simultaneous detection on long pre-recorded video files.
- Wrote python scripts to process to the resulting detections for analysis within ArcGIS.
- Responsible for documenting all research related data and methodologies.

Architectural Associate

DCA Architects Pte Ltd — Jun 2017 – Jun 2019

I designed facilities for condominiums, managed construction contracts and worked on computational design on the sides.

- Worked as a Design Architect in collaboration with local consultant teams in Vietnam for the design of a condominium complex and show gallery in Ho Chi Minh City. Designed auxiliary facilities, facades and the show gallery. Generated building renders and visuals for all client presentations.
- Worked as a Project Architect for 2 Addition and Alteration works. Administrated construction contracts, obtained clearances from regulatory agencies, reviewed shop drawings, provided design directions and produced visuals for presentations.
- Worked on developing computational design workflows within Rhinoceros 3D + Grasshopper and Revit + Dynamo. Contributions includes:
  - A simple pipeline to generate customised perforated panels within Rhinoceros 3D.
  - An experimental workflow that enables massing model within Revit to be automatically generated based on inputs from an Excel sheet.

EDUCATION

National University of Singapore

Master of Arts, Architecture	(2016-2017)
Bachelor of Arts (Hons. Distinction), Architecture	(2012-2016)

SKILLS

CAD & Modelling

Rhinoceros 3D	(proficient)
Grasshopper	(proficient)
AutoCAD	(proficient)
Sketchup	(proficient)
Revit	(prior exp)
Dynamo	(prior exp)

Graphics & Rendering

Photoshop	(proficient)
Illustrator	(proficient)
InDesign	(proficient)
Lumion	(proficient)
Vray	(prior exp)

Programming Languages

Python	(proficient)
C++	(basic proficiency)
Java	(prior exp)

Others

ArcGIS	(basic proficient)
Unreal	(prior exp)

LANGUAGES

English	(Professional)
Mandarin	(Native)