TRYGVE WASTVEDT

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724-714-1689

EDUCATION

MIT	Master of Architecture	2011 – 2015
ST. OLAF COLLEGE	Bachelor of Arts, magna cum laude, in Mathematics and Studio Art	2006 – 2010

EXPERTISE

ARCHITECTURAL DESIGN
Master of Architecture thesis: Heliocentric Architecture – Materializing Solar Cadences – architecture which is tuned to latent diurnal and annual solar cycles, presented using virtual reality and animation.

ENVIRONMENTAL SIMULATION
Developed energy modeling workflows in Grasshopper for designers to use in conceptual design. Designed passive neighborhood using DIVA, umi, and DesignBuilder.

DIGITAL TOOLMAKING
Created Grasshopper library used for design and production of architectural metal covering parametric hardware, part layout, sheet metal unfolding, and shop file creation.

SOFTWARE DEVELOPMENT
Designed and developed full-stack project management web application. Developed code to price, detail, and visualize users' ImageWall.com designs based on location-based wind load data.

DIGITAL FABRICATION
Designed and fabricated custom hardware, software, and tooling for 6-axis robotic arm. Designed wood joinery technique, developed software to automate writing of machine code, and built pavilion.

DATA ANALYSIS
Developed set of interactive dashboards to aggregate and analyze multiple sources of company data. Used by team to estimate new jobs and reveal opportunities for improvement and optimization.

TEACHING
Held seven graduate-level teaching assistantships. Planned and taught weekly lessons and workshops on advanced parametric design. Assistant instructor for graduate course on robotic fabrication.

DESIGN ENGINEERING
Designed structural systems and assembly details for architectural metal, furniture, and a custom curtain wall system. Developed standard parametric detail library for future projects.

PROJECT MANAGEMENT
Managed design, engineering, fabrication, and installation of Zahner ImageWall and furniture projects. Helped grow ImageWall business by 450% during tenure on four-person team.

Ladybug
Honeybee
DIVA, umi
DesignBuilder
THERM
Sefaira

Grasshopper
Rhino
Revit
AutoCAD
CATIA

Virtual reality
Maxwell, V-Ray
Animation
Adobe CC

GIS
Excel
Power BI

6-axis robot
4-axis mill
3D printer
Woodworking

JavaScript
C#
Python
C++
SQL
Angular
d3
three.js

EXPERIENCE

ZAHNER	R&D Engineer (Kansas City) – Design engineering, automation	2015 –
PERKINS+WILL	Digital Practice Intern (Boston) – Energy modeling, augmented reality	summer 2014
MIT	Graduate Researcher (Cambridge, MA) – Robotics, toolmaking	summer 2013
CJS ARCHITECTS	Architecture Intern (Rochester, NY) – Design, drawing, presentation	summer 2012