

# Dan Rapoport

🌐 **Rapoport.Design**  
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## Skills

### Making

- Product Development
- Collaboration
- Problem Solving
- Systems Thinking
- Human Centered Design
- Design Research
- Ideation
- Iterating with Intention
- Design Optimization
- Cost Analysis

### Rapid Prototyping

- 3D Printing (FDM/SLA/SLS)
- CNC Machining
- Laser Cutting
- Vacuum Forming
- Woodworking
- Metalworking
- Arduino / C++
- Python / Java
- Rendering
- FEA / GD&T

### Software

- Solidworks
- OnShape
- Fusion
- Rhinoceros 7 (15+ years)
- Grasshopper
- Vectorworks
- Revit/Dynamo
- Blender
- Unity
- AutoCAD
- Cura
- V-Ray
- Lumion
- Keyshot
- Adobe CC Suite
- Figma
- Miro
- Python / CircuitPython
- Quickbooks

## Wearer of Many Hats.

**Happiest previsualizing and solving mechanical problems through prototyping and testing to improve human experiences.**

## Education

### Master of Arts in Design Engineering (MADE)

Brown University & Rhode Island School of Design, Providence, RI  
July 2021 - June 2022

### Accredited Bachelor of Architecture Minor Visualization & Representation

Carnegie Mellon University, Pittsburgh, PA  
September 2008 - May 2013

## Experience

### NASA RI Space Grant Fellow

June - September 2022

### Building a handheld, AR-assisted Construction 3D Printer for Mars

- Turning astronauts into 3D Printers; developing a regolith-based “concrete” and handheld, semi-automated extrusion device to form a viable habitat-building infrastructure for the first Martian astronauts
- Formed interdisciplinary team including biochemical engineers, mechanical engineers, game developers and roboticists
- Consulting with heads of NASA labs, experts at lead biomaterials companies, and space architecture firms to form novel solutions

### CubeSat Engineering Analyst

Brown University Space Program (SBUDNIC) , Providence, RI  
January - June 2022

- Guided critical system teams and developed various solutions for custom 3U Cube Satellite, built under \$10k (these average \$200k) from off-the shelf and open source components
- Fully developed custom ABS and aluminum parts for satellite integration and testing apparatuses

### TA, Working Arts

Rhode Island School of Design, Providence, RI  
August - December 2021

- Taught basic mechanics and mechatronics for use in toymaking and artistic creation

### Design & Operations Director

Bento Homes LLC, Honolulu, HI / New York, NY  
April 2018 - March 2020

- **Formed and ran design team, office, and showroom**
- **Reported directly to CEO**
- Designed, managed construction of, and ran commercial showroom, containing working tiny-home and coworking space
- Worked with Local print, TV Media, Marketing Teams for widespread brand recognition
- Oversaw Sales Team and coordinated with Marketing Team to create cohesive printed and digital media
- Performed market research and grew sales of luxury homes
- Created a local network of trusted contractors, suppliers, and design professionals

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## Experience (cont.)

### Lead Designer

Sept 2016 - April 2018

- Designed systematized, component-driven, modular tiny-homes for the Hawaiian Market
- Created custom parametric families and templates within Revit for our proprietary, wall-mounted furniture system that automatically generated customer invoices, millwork drawing sets, and contractor installation instructions

### Summer Resident

New York MakerSpace, New York, NY

June 2016 - Sept 2016

- Selected for residency to test ideas on fabrication methodologies based around 3D printing, milling, and casting to revive historical detailing on historic structures

### Architectural Designer

Turett Collaborative, New York, NY

July 2015 - Sept 2016

- Worked on renovations of historic brownstone townhomes
- Responsible for coordination with NYC Landmarks Preservation Commission
- Recreated historical facades with high attention to detail, based on thorough research
- Bespoke design of high-end interiors
- Coordination with trades to create unique architectural features for notable clients

### Exhibit Designer

Wildlife Conservation Society, Bronx, NY

July 2015 - October 2015

- Designed unique, interactive elements for 4 exhibits at “Sea Cliffs” Exhibit for the **Coney Island Aquarium**
- Worked closely with architects, mechanical engineers, and artists to condense wide-scope visions into real products
- Produced detailed shop drawings of unique exhibit elements and overall exhibit

## Honors

### Expert Presenter at the RI Space Grant Consortium

- April 2022, discussed role in designing and developing the novel mechanisms present on the SBUDNIC CubeSat
- **Expert Presenter at the Children's Museum of Manhattan**, June 2015, spoke to the influence of Islamic geometric patterns and their relation to modern parametric architecture
- **Expert Presenter at the 3D Printing Conference & Expo**, April, 2015, displayed elaborate models to showcase SOMA Architects
- **Carnegie Mellon Honors Dean's List**, 2010 – 2013
- **Altenhof Scholarship**, April 2011, Presented for academic, aesthetic and extracurricular excellence
- **Expert Presenter, Fine International Gigapixel Conference**, November 2010, delivered presentation on super-high definition documentation and photogrammetry of buildings and landscapes in Iceland, Finland, Estonia, Sweden, Denmark and Norway