

BRADLEY MACHADO

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ARCHITECTURE INTERN — CHAMPAIGN STUDIO

PROFILE

M.Arch candidate at the Illinois School of Architecture, focused on building performance and analysis. Design work spans generative form-finding through construction-level detailing. Six years as a planner and project manager before the degree — construction management, building retrofits, and energy management on federal projects — so drawings are read against how the building gets built and what it costs to run.

Availability — Final year, coursework front-loaded to open it for practice — one studio and a seminar in Advanced Façade Design this fall; final studio and Professional Practice in the spring. Roughly 28 hours weekly: all day Tuesday and Friday, plus weekday mornings through noon.

EDUCATION

Master of Architecture — High-Performance Building Design & Analysis | University of Illinois Urbana-Champaign Expected 2027
B.S., Society & Environment | University of California, Berkeley 2018

SOFTWARE

Modeling & documentation — SketchUp (+ extensions), Rhino, Grasshopper, AutoCAD, Dynamo, Revit

Visualization & graphics — Enscape, Blender, Adobe Photoshop / InDesign / Illustrator

Performance analysis — EnergyPlus, OpenStudio, Ladybug/Honeybee, Wallacei, Galapagos

Data & scripting — Python, SQL, Databricks/PySpark, MATLAB, Excel (Solver), ComfyUI / LoRA fine-tuning, YOLO v.7

SELECTED DESIGN WORK — PORTFOLIO AT BRADMACHADO.COM

Cyprus Cove Small coastal vacation house organized around a protected courtyard — a tectonic elevation set against a stereotomic one.
SketchUp, Enscape

Hub Boriken Mixed-use community hub balancing program density with street-level porosity. *SketchUp, Enscape*

Less Siteless Traffic, solar, and pedestrian data from Suseong-gu, Daegu driven into form through multi-objective optimization.
Grasshopper, Wallacei X, Ladybug, YOLO v.7, FDM printing

Artificial Context Context extracted from a fine-tuned image model rather than from a site — latent-space topography carried through structural and solar optimization. *Grasshopper, Flux.1-dev LoRA, Karamba3D, Wallacei X, Ladybug, MATLAB*

EXPERIENCE

Research Assistant — Building Energy Analytics | Responsive Architecture Lab, Illinois School of Architecture Spring 2026 – Present
— Characterizing the U.S. single-family detached building stock for an HVAC OEM client — harmonizing ~84M property records against the ResStock simulation dataset to transfer peak heating and cooling load estimates onto each record. Built in Databricks / PySpark.

Research Planner — Infrastructure & Resilience | U.S. Army ERDC–CERL 2021 – 2025
— R&D chair for Department of the Army long-term capital investment planning; evaluated energy solutions and presented investment options to Senior Executive Service and General Officer decision-makers.
— Secured \$2.075M in competitive funding across two studies; led cross-agency teams on installation and regional resilience assessments across North America, Europe, and the Pacific.

Utilities Manager | U.S. Army Garrison – Presidio of Monterey 2019 – 2021
— Owner's representative for a garrison-wide utility system — data center, satellite communications ground station, public safety, academic and administrative buildings, and 100+ housing units. Accountable for \$10M in annual commodities and \$5M in active construction.
— Delivered building energy retrofits end to end — scoped and awarded the studies that tested each project's financial viability, then managed construction of the projects that cleared.
— Contracting Officer's Representative on 11 privatized utility contracts and the Resource Efficiency Management and Utility Energy Service Contract vehicles — task orders, modifications, submittal and quality assurance review, payment approval, and issue resolution.
— Cleared FAA obstruction review adjacent to an active airfield and NEPA consultation for a protected vernal pool crossing, compressing a standard 3–4 year utility planning cycle to under twelve months with no loss of site uptime.

Health, Safety & Environmental Manager (Contract) | The Whiting-Turner Contracting Company 2018 – 2019
— EHS medical operations on the \$3B joint Google and NASA Bayview project; built the incident reporting system used to identify safety hotspots and streamlined site orientation and access, saving 20–30 labor hours daily.

Critical Care Flight Paramedic | U.S. Army — 3rd Infantry Division 2010 – 2014
— Aeromedical evacuation and critical care; Afghanistan, 2012–2013.

RECOGNITION

Department of the Army Quality Step Increase · Civilian Service Commendation Medal (2021) · Civilian Service Achievement Medals (2020, 2019) · Invited presenter, DoD Utilities Conference (2019).