Zack Weaver

[a.k.a. Zachary Jacobson-Weaver]
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Contact
e: zaja9653@colorado.edu
p: 720 372 9305

Education

- PhD Student, ATLAS Institute, Colorado University Boulder, 2014 - 2015
- NSF Computer Science Fellowship, "Project eCSite": Integrating Computer Science into Traditional Studies, P.I.- Debra Goldberg, NSF grant #0841423, 2014-2015
- Master of Tangible Interaction Design, 2013, with Honors, School of Architecture, College of Fine Arts, Carnegie Mellon University, Pittsburgh, Pennsylvania
- BFA, Art, 2001, with Honors, Dean's List, School of Art & Design, University of Michigan, Ann Arbor, Michigan
- Non-Degree Courses, 2007 Washtenaw Community College, Ann Arbor, Michigan

Employment

- **Director, BTU Lab (Blow Things Up)**, ATLAS Institute,Colorado University, Boulder CO: 10/2022-present
- **Teaching Assistant Professor,** ATLAS Institute, Colorado University, Boulder CO: 10/2022-present
- **Creative Technologist, BLDG 61**, Boulder CO: 3/2017-10/2022
- **Lecturer, ATLAS Institute**, Colorado University, Boulder CO: 1/2020-10/2022
- **Chief Design Officer, MomoTone Inc** , Boulder CO: 11/2014 – 12/2016
- **Research Assistant** , "Project eCSite": Integrating Computer Science into Traditional Studies, P.I.- Debra Goldberg, NSF grant #0841423, 2014-2015
- **Adjunct Instructor** , Carnegie Mellon University School of Architecture **:** 6/2013 - 5/2014 (Architectural digital media, digital fabrication, computational design)
- **Researcher** , Autonomous Robotic Applications of Ornamental Plaster ("Morphfaux"), (Research of force/torque feedback control in industrial robotic fabrication of complex ornamental plaster surfaces)
- **Instructor** , TechShop Pittsburgh: 4/2013 - 6/2014 (Community instruction of various analog and digital fabrication processes)
- **Researcher, Designer and Lead Fabricator** , Bio_Logic Research Group, Carnegie Mellon University: 12/2012 – 6/2014 (Biomimetic design in architectural responsive and interactive performance)
- **Researcher: Project S.M.L.XL,** Carnegie Mellon University School of Architecture: 1/2013 (Research of data analysis applications in recursive, parametric architectural design)
- **Teaching Assistant** , Carnegie Mellon University School of Architecture: 9/2012 - (Professor Liss Werner "Codes in the Clouds IV", Undergraduate instruction in Processing programming environment and related libraries)
- **Designer/Fabricator,** NORDT Labs Residency, Carnegie Mellon University: 4/2013 (Design, Fabrication of "Brick" iPhone,

http://blog.makezine.com/2012/04/16/brickify-your-iphone-to-impress-the-neighbors/)

- **Materials Fabrication Studio Coordinator** , University of Michigan School of Art and Design: 1/2007–8/2011 (Graduate and Undergraduate conceptual and technical instruction, oversight of 5000 sq/ft multipurpose 3D fabrication studio)
- **Assistant to Artist** Geoffrey Mann, 2010 (CAD/CAM slip cast plaster mold design/cut, "Crossfire" series)
- **Assistant to Artist** Christopher Sperandio, 2010 (Mold making, casting, CNC routing, "Conflict Theory")
- **Assistant to Artist** William Dennisuk, 2010 (Design, planning, fabrication and installation of "Vessels" series)
- **Sculptor** , Taubman College of Architecture and Urban Planning 2/2008 (Bronze statue for outgoing Dean, Douglas Kelbaugh)
- **Assistant to Artist** Lee Diegaard, 2000 (Mold design/ build, gypsum cast)
- **Assistant to Artist** Louis Marinaro, 1998-2000 (Clay sculptor, mold maker, bronze sculptor)

Professional Activity

PORTFOLIO: http://enartdezark.blogspot.com/p/portfolio.html
Team Lead: BLDG 61 Space Camp 2022. Team of 6 with 12 students, DIY High-Altitude balloon launch.
Instructor: Colorado University, ATLAS Institute, "Creative Technologies", introduction to microcontroller electronics, 1/2022-5/2022
Curator: Maker Made 2022: Works Presented by BLDG 61, Canyon Gallery, 2/2022-3/2022
Lead Fabricator: Denver Art Museum, Thread Studio, w/ Curator Steven Frost, Exhibition design, 10/2021
Keynote Speaker: Northeast Ohio Regional Library Consortium: "Don't Panic. We're going to Make it.", 9/3/2020, https://mms.neo-rls.org/Calendar/moreinfo_responsive.php?eventid=58354&org_id=NEOL
Publication: Daily Camera, BLDG 61 Produces PPE for Frontline Workers, 5/5/2020, https://www.dailycamera.com/2020/05/05/boulder-library-community-workshop-develops-personal-protective-equipment-for-hospitals-city/
Publication: KGNU Radio, TRENDS Diary, "Library Makerspace Fosters Self-Sufficiency, 3/26/2021, https://news.kgnu.org/2021/03/trends-diary-library-maker-space-fosters-self-sufficiency/
Team Lead: Boulder Public Library Grants Team: Led team of seven coworkers, awarded $30,000. 4/2020 - 11/2020
Team Lead: BLDG 61 Makerspace: Led team of 3.5 coworkers through pandemic operations and reopening, 4/2020-present
Curator: Maker Made 2020: Works Presented by BLDG 61, Canyon Gallery, 2/2020-3/2020
Instructor: Colorado University, ATLAS Institute, "Object", introduction to microcontroller electronics, 1/2020-5/2020
Grantee: Cognizant Foundation 'Making the Future': BLDG 61 Space Camp: $20,000: 12/2019
Grantee: Boulder Library Foundation, BLDG 61 Space Camp: $10,000: 12/2019
Grantee: Boulder Library Foundation, Video Content Production: $18,000 12/2019
Publication: TESTED.COM, Meet the Maker: BLDG 61, 8/2019, https://www.tested.com/making/887024-meet-maker-bldg-61/

Designer/Fabricator: Project Egress, National Air and Space Museum with Adam Savage, 7/18/2019
Team Lead: BLDG 61 Space Camp 2019. Team of 7 with 10 students, DIY High-Altitude balloon launch.
Award: Library Journal Movers & Shakers 2019, 3/2019
Co-Director: "Maker's Edge" creative entrepreneur program, with Sharon King of the Boulder Small Business Development Center, 7/2019-present
Curator: Maker Made 2019: Works Presented by BLDG 61, Canyon Gallery, 2/2019-3/2019
Speaker: KGNU Radio Interview: "The Joy of Learning and Creating: The Rise of Makerspaces", 1/30/2019, https://news.kgnu.org/2019/01/the-joy-of-learning-and-creating-the-rise-of-maker-spaces/
Award: Infosys Foundation Maker Award for BLDG 61, 5/2018
Speaker: Association for Learning Environments Conference: Makerspaces for Gifted-and-Talented Students, 4/25/18
Publication: Best of Westword Arts & Entertainment: Sewing Rebellion at BLDG 61 , 3/29/18: http://www.westword.com/best-of/2018/arts-and-entertainment/best-local-faux-frau-project-10130538
Curator: Maker Made 2018: Works Presented by BLDG 61, Canyon Gallery, 12/2017-1/2018
Artist Assistant: Material Frequency event at the Denver Art Museum, BLDG 61, Steven Frost. 1/2018
Grantee: Maker Ed "Making Spaces" cohort 2: Representative of Maker Ed at the local school level: 1/2018 - present.
Lecturer: University of Colorado Boulder, various dates 2014-present
Speaker: TEDxSalon, "Designing Robots for Democracy", Longmont, CO. 11/2015
Speaker: EdMedia 2015, "Voxel Printer: A 3D Printer Teaching Machine", Scaffolding hardware technology to teach additive manufacturing principles. Montreal, Canada 6/2015
Publication: Hackaday, "Auto Meter Reader Feeder Keeps Meter Maids at Bay", 2/2015 http://hackaday.com/2015/02/14/auto-meter-reader-feeder-keeps-meter-maids-at-bay/
Presenter: Boulder County Mini-Maker Faire, Boulder, CO, 1/2015
Volunteer: CoderDojo Boulder, Boulder, CO, various dates 2014/2015
Speaker: Open Hardware Summit 2014, "Robo-Op" open-source smart end-effector integration for industrial robotic interaction". Rome, Italy. 10/2014
Designer: 7bit Design, Interactive way-finding map for Syracuse University with Eric Brockmeyer, 4/2013
Speaker: CASE Technologies Network Event, "Digital Fabrication in Architectural Research and Education" with Madeline Gannon, TechShop, Pittsburgh, PA 4/2013
Author: Encoding Architecture - The Book [ISBN-13 : 978-0976294146], "Apprenticeship and Mastery in Digital Craft", 3/2019
Speaker: Encoding Architecture Conference 2013, "Apprenticeship and Mastery in Digital Craft",, Carnegie Mellon University, Pittsburgh PA, 2/2013
Facilitator: To Be Designed Workshop: A Product Catalog of Future Objects (Including Bruce Sterling, John Marshall, and Near Future Labs), Detroit, MI 10/2012
Presenter: Children's Open Workshop, "Auto-Meter-Reader-Feeder", Assemble PGH,, Pittsburgh PA, 8/2011
Presenter: Children's Museum of Pittsburgh, "Energy Harvesting Playground",, Spark funding event, Pittsburgh PA, 4/2012
Publication: Makezine.com, "Brickify Your iPhone to Impress the Neighbors", http://blog.makezine.com/2012/04/16/brickify-your-iphone-to-impress-the-neighbors/

Publication : CNET.com, "Digital foreplay, virtual house flies among Carnegie Mellon work." http://news.cnet.com/2300-17938_105-10012329.html
Featured Maker: Instructables.com, "Idiot-proof dishwasher", "Augmented Hyper-Reality Glove", 2011-2012
Guest Critic: Digital Fabrication courses, Carnegie Mellon University School of Architecture, for Professor Jeremy Ficca 12/11, 5/12, 12/12
Presenter: Undergraduate Thesis Seminar, Carnegie Mellon University School of Architecture, for professor Pablo Garcia 9/2011
Guest Critic: Smart Surfaces, Heliotropic Smart Surfaces, University of Michigan, for professor John Marshall, 12/2010
Guest Critic: North Campus Living Arts Community, for Jean Leverich, University of Michigan, Ann Arbor, MI 12/2010
Publication: Art Papers, Ann Arbor.com, Ann Arbor Observer, University Record, for William Dennisuk "Vessels" series, 2009, 2010
Guest Critic: Taubman College of Architecture and Urban Planning, for professor Michael Kennedy, 2/2010
Guest Critic: Smart Surfaces, Biomimetic Smart Surfaces, University of Michigan, for professor John Marshall, 5/2010
Author: Catalogue for "Material Matters", the work of Susan Crowell and Larry Cressman at River Gallery, Chelsea, MI, 7/2009
Award : Michigan Emmy, 2009: Technology in Media: Play Gallery Animation Station
Award : Outstanding Staff Member, University of Michigan School of Art & Design, 2008-2009
Instructor : Residential College CTC Program, 6/2009
Publication : "Making of the Art Car" , PlayGallery.org, 5/2009
Publication : Ann Arbor Film Festival, "Art Car" and Play Gallery Animation Station, 5/2009
Team Lead : U of M Art & Design , Witt visiting artist, filmmaker Harrod Blank in collaboration with Ann Arbor Film Festival. 5/2009
Juror : "The Design Show", Jean Paul Slusser Gallery, Ann Arbor MI, 4/2009
Exhibitor: Shadow Art Fair, Play Gallery Animation Station, 3/2009
Publication: Concentratemedia.com, Interview for Play Gallery Animation Station, 3/2009
Publication: U of M Business School, Interview for Play Gallery Animation Station, 11/2008
Instructor: UROP (Undergraduate Research Opportunity Program), on Rapid Prototyping technologies and practices, 2008
Instructor: U of M Residential College, for professor Dan Price, 3/2008
Instructor: International Sculpture Conference, "Cast Iron Intensive Workshop" with SAIC, GVSU, 6/2008
Presenter: UofM "Celebrate Invention" (Play Animation Station), 4/2008
Designer/Fabricator: Play Gallery Animation Station, 2-4/2008
Sculptor: For Pablo R. Garcia, William Muschenheim Fellow in Architecture February 4/2008
Award: Best Staff Team , University of Michigan SoAD March 1/2008
Sculptor: 3D Printed Sand Molds, in collaboration with Brett Lyons (Graduate Student in ME) and UM3D Lab, 4/2007
Researcher: University of Michigan Art & Design, Rapid Conference, Society of Manufacturing Engineers, 3/2007
Artist: Burning Man, "White Flag", 8/2005

Award : Viewer's Choice , All Michigan Show, Studio 23, Bay City, 5/2005
Instructor : Western Wayne County Correctional Facility, various 1999
Speaker : Art in Prisons Program, Outreach Symposium, 5/1998
Instructor : Henry Ford High School, Detroit, MI, various 1998
Instructor : Gus Eagler Correctional Facility, Jackson, MI, various 1997

Skill Set

· **Project Leader / Player-Coach :** Directed and contributed to 100+ team and individual design projects under budget and time constraints.
· **Robotic and Digital Fabrication** : Industrial Robotics, extensive CNC, Waterjet, extensive 3D printing, multiple laser, multiple welding/cutting, multiple CAD/CAM softwares
· **Electronics/Electro-mechanics** : Arduino environment, Processing/P5.JS, PCB design
· **Reverse Engineering** : 3D Scanning, model repair, additive and subtractive digital fabrication
· **Programmer Software** : JAVA, Arduino, Processing, RAPID, Eclipse, custom interface design
· **Fabrication** : Extensive Mold Making, Extensive Casting Hot/Cold Metal Fabrication, Extensive Woodwork/ Carpentry, Extensive Plastics Casting/ Fabrication, Extensive surface finishing, Extensive Vacuum-forming,...I can make lots of stuff and am always learning to make more.
· **A/V Workflow:** Extensive audio/video recording, editing and publication
· **Social Media:** Fluent in management tools and best practices for social media engagement
· **User Software** : Fluent in organizational and operational office solution software.