Arvind Bhallamudi

Product Designer and Researcher

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LinkedIn ▪ Website
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Strategic product designer and researcher with 6+ years of experience working in climate-tech, healthcare, and ed-tech. I help organizations build products, services, and digital experiences toward planetary health and human well-being.

Some examples of my innovation and impact include:

- Led the research and UX design and strategy for fusion energy startup, Xcimer, supporting a $100M Series A.
- Founded MycoType Materials ($12,000 grant), to support carbon-capturing materials in prototyping and design.
- Developed 3 medical devices at IIT Bombay, including a prosthesis and glaucoma screener (patent granted).

PROFESSIONAL EXPERIENCE

BIG DREAMS STUDIO — Providence, RI ▪ 2023 – 2025

Design Strategist (2024 - 2025)

Worked closely with CXOs, managers, directors, in internal and external teams across 12+ projects, bridging brand strategy and UX/UI design for a Fortune 500, tech startups, nonprofits, and small businesses.

- **Rhode Island Foundation:** Led the research and strategy for a two-day convening session to engage 50+ of nonprofits in cross-sector collaboration, co-designing capacity building efforts with the RIF leadership team.
- **Ocean Futures:** Built and launched an online ‘Ocean Futures Toolkit’: a digital library of 8+ drivers, 100+ trends, and contexts to equip audiences with climate literacy and design; and co-hosted Possibility Ocean’25.
- **Collins Aerospace *Wingwalker***: Led 7 qualitative interviews and data synthesis with pilots, marshalls, turn coordinators; and made UI mockups to address new opportunities to reduce wingtip collisions in airfields.

Strategist (2023 - 2024)

- **Xcimer Energy Corporation:** Led the competitive positioning, UX research and science-centered storytelling, designed content and UI for a website, investor decks, and print media; supporting a Series A ($100M).
- **Collins Aerospace *AIX ADAPT™:*** Worked with teams to design, develop and exhibit 3 mobile and tablet applications for passengers and flight crew, highlighting brand, accessibility and custom service requests.
- **Overproof:** Led the qualitative UX research and UI design system, heading 8 interviews with CEOs, regional managers, and salespeople, synthesizing user recommendations into route-to-market workflows for F&B.

MYCO-TYPE MATERIALS — Boston, MA ▪ 2023 – 2025

Principal Investigator

Funded by the RISD Somerson Sustainability Innovation Fund and Mark Harrison Grant (worth $12,000) and supported by the RISD Edna Lawrence Nature Lab, CoWorks Interdisciplinary Lab, and ID Department.

- **Biodesign Programs:** Created an open-source website and resource, and conducted a series of workshops and talks reaching 300+ students, educators and makers at the Rhode Island School of Design, Brown University, Autodesk Research Connections, EcoLaunch Accelerator, and through online workshops.
- **Myco-Material Library:** Achieved 2-3x higher compressive strength in custom myco-sheets compared to traditional mycelium blocks. Formulated 3 custom biofabrication processes with local waste streams and fungi to grow carbon-negative, non-toxic and compostable raw materials and objects for industrial applications.

RISD x HYUNDAI MOTOR GROUP — Providence, RI ▪ 2022 - 2023

Research & Innovation Fellow (2023)

- **Autonomous Vehicles and Future Spaces:** Selected as a research fellow through the ‘Kia x RISD’ studio, where I developed mycelium-based furniture inspired by speculative mobility and ecological biophilia. My study focused on the biodesign and biofabrication of fungi-based modular furniture and interior products such as lamps and planters that are sustainable, lightweight and fire-resistant in autonomous interior spaces.

Assistant Curator (2022)

- **Sustainable Futures Exhibition:** Helped lead a team of 6 to curate, design, organize and launch a 2 month exhibition, developing written and visual content for print and social, for the academia-industry partnership.
- **Tech Landscapes Studio:** As Technical Assistant in this Hyundai studio with the Digital Media Department, I supported participants and faculty, and conducted independent landscape research with GPS, weather stations, microphones, underwater drones, and macropods during field research at Narragansett Bay, RI.

BIODESIGN CHALLENGE — New York City, NY ▪ 2024

Researcher & Writer

- **STEM Action Grant:** Proposed and secured funding from the STEM Action Grant 2024, worth $5,000 and compiled a list of 60+ potential grants through National Science Foundation (NSF) and CSR programs.
- **Resource Library:** Curated 200+ papers, articles and resources across energy, materials and food systems.

RHODE ISLAND SCHOOL OF DESIGN — Providence, RI ▪ 2022 - 2023

Graduate Instructor

- **CoWorks Interdisciplinary Lab:** Conducted 100+ trainings and consultations for team members, students and faculty on four 3D printing stations, laser cutting, and vacuum forming, created a custom guide for 3D printing.
- **Edna Lawrence Nature Lab:** Conducted weekly trainings and workshops for students, faculty and staff; experimented with new biomaterials, and created a labelled system for a material library with 120+ samples.

DIMIOUR DESIGN STUDIO — Mumbai, India ▪ 2019 - 2021

Founder

- **3D Printing Venture:** Formed a six-person team to provide services in mechanical design and 3D printing. Drove a 150% increase (2.5x) in quarterly revenue by implementing educational services, media campaigns.
- **CAD and Additive Services:** Completed 45+ 3D design and 3D printing projects for local startups, brands and individuals; heading the design, fabrication and delivery of 600+ parts across 10+ cities in India.
- **Industry Workshops:** Diversified to educational markets and conducted 2 hybrid-format workshops in partnership with Imaginarium and Autodesk, certifying 34 registered students in ‘Design for 3D Printing’.

CURIOSITY GYM — Mumbai, India ▪ 2020 - 2021

Lead Product Designer (2021)

- **Web and Creative Direction:** Led the design direction across LMS software and website for the ed-tech startup, and headed 3 campaigns that boosted annual traffic by 35%, achieving 1st page rankings on SEO.
- **COVID-19 Emergency Response:** Built 100+ COVID-19 protective equipment overnight, and donated to KEM as an emergency response. Worked with a team to develop a touchless delivery box with a mobile application.

Design Instructor (2020 - 2021)

- **Design Pedagogy:** Created and conducted courses, workshops and mentorships on design thinking, product design, 3D modeling and 3D printing for 500+ K-12, undergrad and grad students across 5+ schools.
- **Science Kits and Exhibits:** Designed and fabricated an arduino-based robotics kit and 2 science exhibits.

NATIONAL INSTITUTE OF INTERDISCIPLINARY SCIENCE & TECHNOLOGY — Trivandrum, India ▪ 2019

Freelance Designer

- **SMART Foundry:** Developed the spatial layout, enclosure and CAD for 4 units: 3D printing, molding, melting, and sand-reclamation part of an IoT-based, compact foundry system that can be operated by 1-2 personnel.
- **Multi-Purpose Dashboard:** Designed a intuitive interface to track, control and optimize workflows to measure errors, improve throughput and turnaround efficiency, and access safety features of the foundry system.

BIOMEDICAL ENGINEERING & TECHNOLOGY INNOVATION CENTER, IIT BOMBAY — Mumbai, India ▪ 2018

Mechanical Engineering Intern

6 month internship working with different teams of doctors and engineers to build and test 3 medical devices:

- **Glaucoma Screener:** Created a novel, head-mounted device that is convenient, accurate and portable, and can be used to check IOP (intraocular pressure), preventing deterioration in eye-related diseases (*patented*).
- **Transfemoral Prosthesis:** Supported the team with design and manufacturing of a parametric prostheses for 4 patients, comparing conventional Plaster-of-Paris (PoP) sockets with the developed parametric prostheses.
- **Heart Surgery Tool:** Developed and fabricated a tool to check aortic valve diameters, and cut and fold the pericardium tissue into an artificial valve, successfully used in 15+ heart surgeries at Fortis Hospital, Mumbai.

SHENOY STUDIO, IDC SCHOOL OF DESIGN, IIT BOMBAY — Mumbai, India ▪ 2017

Industrial Design Intern

- **Rattan Palanquin (*Cane Palkhi*):** Worked with local cane craftsmen to craft a lightweight, flexible yet rigid, eco-friendly palkhi that integrates native processes with stainless steel. The product reduced the load carried by pilgrim porters by 60%. Currently in use at holy sites such as Vaishno Devi and Elephanta Caves in India.

PATENTS & PUBLICATIONS

Designboom Magazine ▪ Myco-Type Materials **2025**
Article "Myco-Type Creates Mycelium Blocks and Sheets with Sawdust, Coffee Grounds and Local Waste"

Headgear Ophthalmic Device ▪ Symbiosis Institute of Technology, India **2020**
International Patent Published (WIPO: #WO2020141499), Indian Patent Granted

Multi-Directional and Multi-Functional Lighting Assembly ▪ Dimiour Design Studio, India **2019**
Indian Patent Granted (#201921050663)

International Conference on Research into Design, Springer: Design for Tomorrow III ▪ IDC, IITB, India **2020**
Proceedings "Design and Prototyping of a Head-Mounted Ophthalmic Device for Monitoring Glaucoma"

Conference on Indian Patents, Copyrights, Innovations and Startups ▪ PCCOER, India **2020**
Speaker "Publishing and Patenting in Medical Device Design and Innovation"

National Conference of Indian Association of Assistive Technologists ▪ Bhubaneswar, India **2018**
Proceedings "Parametric Design and Hybrid Fabrication Process of Above-Knee Prosthesis"

COMMUNITY & VOLUNTEERING

- **Co-Founder, Director of Design, CARES.green Foundation** **2025**
- **Climate Solutions Researcher, Biodesign Challenge** **2023 - 2024**
- **Board Member, Finance Manager, RISD IDSA Chapter** **2022**
- **Founding Member, Design X Health, RISD and Brown University** **2021 - 2022**

SELECTED HONORS & AWARDS

- **Research Advisor, Possibility Ocean'25 Conference and Summit** **2024 - 2025**
- **Panelist and Contributing Expert, EcoLaunch Accelerator** **2024 - 2025**
- **Speaker, Autodesk Research Connections** **2023**
- **Principal Investigator, RISD Somerson Sustainability Innovation Fund** **2022 - 2023**
- **Principal Investigator, RISD Mark Harrison Grant** **2022 - 2023**
- **Design Research Award, RISD Industrial Design Department** **2023**
- **Speaker, Brown-RISD Innovation Community (BRIC)** **2022**
- **Fred M Roddy Scholarship, RISD Industrial Design Department** **2022 - 2023**
- **Graduate Fellowship(s), RISD Industrial Design Department** **2021 - 2023**
- **Corona Design Challenge Award, IDC School of Design** **2020**
- **Most Distinguished Paper Award (ICoRD'20), IDC School of Design** **2020**
- **Limca National Record, Maximum People Solving a Rubik's Cube (under 60 seconds)** **2013**

EDUCATION

Terra.do Climate Change, Learning for Action (LFA) **2025**
12-week, 100+ hour intensive course focused on climate science, innovation and policy.

Rhode Island School of Design (RISD) ▪ Providence, RI **2021 – 2023**
Master of Industrial and Product Design (MID'23)
Master's Thesis: Fungi in Flux, Designing Regenerative Materials and Products with Mycelium

Symbiosis Institute of Technology ▪ Pune, India **2015 – 2019**
Bachelor of Technology, Mechanical Engineering (B.Tech'19)
B.Tech Project: Glaucoma Screening Device for Early Detection of Eye-related Diseases