

# Arka Majhi

Email: [arka.majhi@iitb.ac.in](mailto:arka.majhi@iitb.ac.in)  
Website : [arkadesignstudio.in](http://arkadesignstudio.in)  
Phone : +91- 89106 - 89698

## Education

<b>Centre for Technology Alternatives for Rural Areas (CTARA)</b> Indian Institute of Technology(IIT) Bombay, India Doctoral Research (PhD)	2018 - Present
<b>Industrial Design Centre (IDC) ,</b> Indian Institute of Technology(IIT) Bombay, India Masters in Design (M.Des.)   Interaction Design (HCI)	2016 - 2018
<b>School of Planning and Architecture, New Delhi</b> Bachelor of Architecture (B.Arch) Registered under Council of Architecture, India	2011 - 2016

## Experience

<b>Course Instructor - Business Analytics</b> Masters of Design- 4th Semester at MIT-Pune, India <ul style="list-style-type: none"><li>7 students were taught for 2 weeks of in-person classes</li></ul> Details of the coursework: <a href="https://arkadesignstudio.in/#Teaching">https://arkadesignstudio.in/#Teaching</a>	August-September 2023 September - October 2024 (upcoming)
<b>Course Instructor - Information Visualisation and Statistical Analysis</b> Bachelors of Design- 5th Semester at MIT-Pune, India <ul style="list-style-type: none"><li>60 students were taught for 6 weeks in-person classes (30 X 6 Hrs)</li></ul> Details of the coursework: <a href="https://arkadesignstudio.in/#Teaching">https://arkadesignstudio.in/#Teaching</a> <ul style="list-style-type: none"><li>An interactive magazine of compilation of the capstone project from the course <a href="#">Data Stories on States of India</a> . Turn the pages and see the stories unfold</li></ul>	August-September 2023
<b>Data Visualization of COVID-19 data of India - IIT Bombay and UNICEF</b> <a href="https://arkadesignstudio.in/dataviz/">https://arkadesignstudio.in/dataviz/</a> <ul style="list-style-type: none"><li>Designing and developing the website from scratch</li><li>Designing interactive data visualizations</li></ul>	April 2020 - July 2020
<b>Course Instructor - Data-Driven Agriculture: Tools and Techniques - IIT Bombay</b> <ul style="list-style-type: none"><li>Trained 150 students of Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani district of Maharashtra</li><li>Topics include collecting, visualizing, and making sense of data in agriculture.</li><li>Introduction to Arduino Programming and using different sensors to collect field data related to agricultural research</li></ul>	10-23 December, 2022
<b>Course Instructor - Capacity Building of different NGOs and government bodies</b> <ul style="list-style-type: none"><li>Trained NGO staff on conducting surveys, processing, reporting, visualizing, and analyzing data.</li><li>The NGOs include UNICEF India, Bharatiya Agro Industries Foundation (BAIF) Development Research Foundation, Coalition for Food and Nutrition Security (CFNS)</li></ul>	2018-Present

## Doctoral Research Fellow, IIT Bombay

- The research involved problem identification, ideation, and strategy design, as well as the execution of a pilot for imparting knowledge and skills through capacity building of the frontline workers.
- Analysed child-wise data from the 4th and 5th rounds of NFHS (National Family Health Survey) to see possible correlations with child malnutrition using STATA, R, Python, and Excel.

July 2018 - Present

## Research Intern (Product Development), ETV Bharat - Digital News app (in 23 official Indian Languages)

- Build UX flows, layouts, and UX guidelines for the upcoming news app

January 2018- June 2018

## Softwares

Data Visualization	D3, Leaflet, Processing, Charts.js, QGIS, ArcGIS, Flourish, Datawrapper, Tableau, Power BI, Google Data Studio, Python Dash, R Shiny, and Plotly
Data Analysis	STATA, Python, R and Excel
AI Libraries (LLM Builders)	Python, OpenAI API, LangChain, HuggingFace, PyTorch, TensorFlow
Database	MySQL, MongoDB, Google Firebase, and Google Sheets
3D Modelling	Sketchup, Blender-3D, 3D-Max, Rhino-3D
Game Engines	Unity3D, Unreal Engine
UI/UX	Adobe XD, Figma, Axure

## Awards and Honors

### Prime Minister Fellowship for Doctoral Research (UNICEF as Industry Partner)

August 2020- July 2024

- Awarded a prestigious scholarship for my doctoral research

### Ministry of Human Development and Resources Scholarship

July 2016- June 2018

- Awarded full scholarship for pursuing postgraduate studies

### Ministry of Social Justice and Empowerment Scholarship

July 2011 - June 2016

- Awarded full scholarship for pursuing undergraduate studies

## Academic Projects

### PhD research project - Exploring the Learning Pedagogies for Refresher Training for frontline workers in India

2018- 2024

### M.Des. Thesis - Training frontline healthcare Workers through Android games

- Assessment and Refresher Training for Anganwadi Workers (AWWs) or Frontline Workers for Mother and Child health care in India Designed and successfully piloted an innovative refresher training and assessment through an Android app for the frontline health workers

2017- 2018

## M.Des. Project - Novel interactions for navigating in VR sports

- Enhancing immersion in Virtual Reality sports through novel physical interactions and haptic feedbacks 2016- 2017
- <https://www.youtube.com/watch?v=Yo3DpL-ajEQ>
- <https://www.youtube.com/watch?v=gR4iuzwCNu4>

## Conference Publications

Title - Refresher Training through Digital and Physical, Card-Based Game for Accredited Social Health Activists (ASHAs) and Anganwadi Workers (AWWs) in India 2024  
Conference - CHI Play 2024, Tampere, Finland

- Link to the paper <https://doi.org/10.1145/3665463.3678819> (Awaiting publication)

Title - Mapping Child Malnutrition and Measuring Efficiency of Community Healthcare Workers through Location Based Games in India 2024  
Conference - Good IT 2024, Bremen, Germany

- Link to the paper <https://doi.org/10.1145/3677525.3678685> (Awaiting publication)

Title - Replay, Revise, and Refresh: Smartphone-Based Refresher Training for Community Healthcare Workers in India 2024  
Conference - HCI International 2024, Washington DC, USA

- Link to the paper [https://link.springer.com/chapter/10.1007/978-3-031-61966-3\\_34](https://link.springer.com/chapter/10.1007/978-3-031-61966-3_34)

Title - Physical and Augmented Reality based Playful Activities for Refresher Training of ASHA Workers in India 2022  
Conference - Asian CHI Symposium 2022 (CHI 2022), New Orleans, LA, USA

- **Best Paper award (long paper category) 🏆 and Best Presentation award 🏆**
- Link to the paper <https://dl.acm.org/doi/10.1145/3516492.3558788>

Title - Refresher Training through Quiz App for capacity building of Community Healthcare Workers or Anganwadi Workers in India 2021  
Conference - Asian CHI Symposium 2021 (CHI 2021), Yokohama, Japan

- **Best Paper award (long paper category) 🏆**
- Link to the paper <https://dl.acm.org/doi/10.1145/3429360.3468186>

## Program Committee/Reviewer

- |                                   |   |                            |    |
|-----------------------------------|---|----------------------------|----|
| ● <b>CHI PLAY 2024 Full Paper</b> | 5 | ● Jury Member for the      | 4  |
| ● CHI 2024 Late Breaking Works    | 4 | ● CSCW 2024 DEMO cycle     |    |
| ● DIS 2024 Full Paper             | 2 | ● Asian CHI 2024           | 2  |
| ● MobileHCI 2024 Full Paper       | 2 | ● Workshop Chair in        |    |
| ● CUI 2024 Full Paper             | 2 | ● Mindtrek Academic 2024,  |    |
| ● CSCW 2024 January Cycle         | 1 | ● Tampere, Finland         |    |
| ● IDC 2024 Work in Progress       | 2 | ● (Upcoming)               |    |
| ● NordiCHI 2024 Full Paper        | 2 |                            |    |
| ● UIST 2024 Full Paper            | 2 | ● Total papers reviewed in | 29 |
| ● SUI 2024 Full Paper             | 1 | ● 2024 (short and long)    |    |

## Conference - Student Volunteer

- Member of IIT Bombay ACM SIGCHI Student Chapter (since November 2019) ([Link](#))
- CHI 2023
- **CHI PLAY 2021 & 2022** ([Link](#)) and UIST 2022
- NordiCHI 2020
- Interact 2017, India HCI 2016 - Part of the organizing team at IIT Bombay

## Public Exhibitions

- Put up a public exhibition (3 years in a row) in TechConnect at TechFest demonstrating my research projects of masters and doctoral research
- Visitors come to the stall, play and experience the designed games on sports and health in virtual environments and apps
- Link to exhibition video: <https://youtu.be/gR4iuzwCNu4>

Techconnect, TechFest  
2017, 18 and 19, at IIT Bombay