# Arka Majhi

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## **Education**

Centre for Technology Alternatives for Rural Areas
Indian Institute of Technology(IIT) Bombay, India
Doctoral Research (PhD)

Industrial Design Centre (IDC),
Indian Institute of Technology(IIT) Bombay, India
Masters in Design (M.Des.) | Interaction Design (HCI)

School of Planning and Architecture, New Delhi
Bachelor of Architecture (B.Arch)
Registered under Council of Architecture, India

## **Experience**

#### POSHAN-Covid19 Web Designer and Developer - IIT Bombay and UNICEF

April 2020 -Present

- Designing and developing the website from scratch
- Update information and circulars from different organizations (IFPRI, WFP, UN India) and Health Ministry, India (MoHFW)
- Data Visualization of the health data from Ministry of Health and Family Welfare, Govt of India for the last 2 years (HMIS datasets)

# Data Visualization of COVID-19 data of India - IIT Bombay and UNICEF <a href="https://arkadesignstudio.in/dataviz/">https://arkadesignstudio.in/dataviz/</a>

April 2020 -July 2020

- Designing and developing the website from scratch
- Designing interactive data-visualizations

#### Course Coordinator - Data Science for Rural Development - IIT Bombay

August 2018

- Designed the structure and formulated the syllabus for the course which is now a part of the Technology and Development curriculum.
- Initiated the idea and convinced the Head of the Department for its need.

#### Course Instructor - Data Driven Agriculture: Tools and Techniques - IIT Bombay

10-23 December, 2022

- Trained 150 students of Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani district of Maharashtra
- Topics include collecting, visualizing and making sense of data in agriculture.
- Introduction to Arduino Programming and using different sensors to collect field data related to agricultural research

#### Course Instructor - Capacity Building of NGOs

- Trained NGO staffs on conducting surveys, processing, reporting, visualizing and analysing data.
- The NGOs include UNICEF India, Bharatiya Agro Industries Foundation (BAIF)
   Development Research Foundation, Coalition for Food and Nutrition Security (CFNS), etc.

#### **Doctoral Research Fellow, IIT Bombay**

 The research involved problem identification, ideation, and strategy design, execution of a pilot for imparting knowledge and skills through capacity building of the frontline workers.

July 2018 -Present

• Analysed child wise data from the 4th round of NFHS (National Family Health Survey) to see possible correlations with child malnutrition using STATA, R and Excel.

## Research Intern (Product Development),

#### ETV Bharat - Digital News app (in 23 Indian Languages)

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

January 2018-June 2018

2015 - 2016

#### Architecture Internship - Spacematters

- Designing and Drafting sports complex of Ashoka University
- Designing and Drafting temple complex in Barmer, Rajasthan
- Model making of a hilly site in Himachal Pradesh from surveyed GIS maps
- Make Detailed Project Report for construction projects
- Architectural Photography

## **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

Database MySQL, MongoDB, Google Firebase and Google Sheets

**3D Modelling** Sketchup, Blender, 3D MAx, Maya

Game Engines Unity3D, Unreal Engine

UI/UX Adobe XD, Figma, Axure

## **Awards and Honors**

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

• Awarded an unique and prestigious scholarship for my doctoral research

August 2020-July 2024

Ministry of Human Development and Resources Scholarship

• Awarded a scholarship for pursuing postgraduate studies.

July 2016-June 2018

Ministry of Social Justice and Empowerment Scholarship

Awarded a scholarship for pursuing undergraduate studies.

July 2011 -June 2016

## **Academic Projects**

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

2018- Present

#### 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 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
- <a href="https://www.youtube.com/watch?v=gR4iuzwCNu4">https://www.youtube.com/watch?v=gR4iuzwCNu4</a>

#### **Conference Publications**

#### Asian CHI Symposium 2021(CHI 2021)

Best paper (long) and best presentation award

2021

## Asian CHI Symposium 2022(CHI 2022)

Best paper (long) and best presentation award

2022

• Link to the paper https://dl.acm.org/doi/10.1145/3516492.3558788

Link to the paper https://dl.acm.org/doi/10.1145/3429360.3468186

#### **Conference - Student Volunteer**

- Member of IIT Bombay ACM SIGCHI Student Chapter (since November 2019)
- NordiCHI 2020 (October 2020)
- Interact 2017, India HCI 2016 Part of the organizing team at IIT Bombay

## **Public Exhibitions**

 Put up public exhibition (3 years in a row) in TechConnect at TechFest demonstrating my research projects of masters and doctoral research

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

- 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

## **Personal Interest**

Playing and watching football | Travelling and exploring rural and tribal India | Watching biographical and war/action movies | Swimming | Mentoring students | Teaching coding to kids | Building mud and bamboo houses for the poor | Organic Farming

Running my own Youtube Channel about healthcare (Few links to the youtube videos)

- 26 May, 2020 | COVID-19 Updates of India
- Comprehensive National Nutrition Survey (CNNS) | Reporting and Analysis (Part 1)
- Comprehensive National Nutrition Survey (CNNS) | Reporting and Analysis (Part 2)