Arka Majhi

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Education

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

2018 - Present

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

2016 - 2018

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

2011 - 2016

Experience

Course Instructor - Business Analytics
Masters of Design- 4th Semester at MIT-Pune, India

August-September 2023

- 7 students were taught for 2 weeks in person classes
  Details of the coursework : https://arkadesignstudio.in/#Teaching

Course Instructor - Information Visualisation and Statistical Analysis
Bachelors of Design- 5th Semester at MIT-Pune, India

August-September 2023

- 60 students were taught for 6 weeks in person classes (30 X 6 Hrs)
  Details of the coursework : https://arkadesignstudio.in/#Teaching
- An interactive magazine of compilation of the capstone project from the course
  Data Stories on States of India Turn the pages and see the stories unfold

Data Visualization of COVID-19 data of India - IIT Bombay and UNICEF
https://arkadesignstudio.in/dataviz/

April 2020 - July 2020

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

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 different NGOs and government bodies

2018-Present

- 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)

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.
- Analysed child wise data from the 4th and 5th round of NFHS (National Family Health Survey) to see possible correlations with child malnutrition using STATA, R and Excel.

July 2018 - Present

**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

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)
- 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- 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 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
- https://www.youtube.com/watch?v=Yo3DpL-ajEQ
- https://www.youtube.com/watch?v=gR4iuzwCNu4

2016- 2017

Conference Publications

Title - Refresher Training through Quiz App for capacity building of Community Healthcare Workers or Anganwadi Workers in India
Conference - Asian CHI Symposium 2021(CHI 2021)
- **Best paper award (long paper category)** 🏆
- Link to the paper https://dl.acm.org/doi/10.1145/3429360.3468186

2021

Title - Physical and Augmented Reality based Playful Activities for Refresher Training of ASHA Workers in India
Conference - Asian CHI Symposium 2022 (CHI 2022)
- **Best paper award (long paper category)** 🏆 **and best presentation award** 🏆
- Link to the paper https://dl.acm.org/doi/10.1145/3516492.3558788

2022

Title - Refresh, Replay, Revise: Smartphone-based Refresher Training for Community Healthcare Workers
Conference - HCI International 2024
- **Short paper accepted. Waiting for conference and publication**

2024

Conference paper Reviewing

- **CHI 2024 Late Breaking Works**   **4**   **Total**   **15**
- **CHI Play 2024 Full Paper**   **5**
- **DIS 2024 Full Paper**   **2**
- **MobileHCI 2024 Full Paper**   **2**
- **CUI 2024 Full Paper**   **2**

Conference - Student Volunteer

- **Member of IIT Bombay ACM SIGCHI Student Chapter (since November 2019)**
- **CHI 2023**
- **CHI Play 2022 and UIST 2022**
- **NordiCHI 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**
- **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