

Nimisha Karnatak

Research Fellow at Microsoft Research

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RESEARCH INTERESTS

Human-Computer Interaction, Healthcare, Accessibility, Human-AI Interaction, ICTD

EDUCATION

- **International Institute of Information Technology, Bangalore** July 2019 - June 2021
Master of Science in Digital Society, Specialization: Data Intensive Digital Design CGPA: 3.72/4.0
 - Dean's Merit List of IIIT-B (For outstanding academic performance)
- **G.B. Pant University of Agriculture & Technology, Pantnagar** Sept 2014 - June 2018
Bachelor of Technology in Industrial and Production Engineering CGPA: 8.093/10.0
 - Vice Chancellor's Silver Medalist of the batch 2014 - 18 (awarded to the highest CGPA holder)
 - Toppers merit scholarship throughout the B.Tech. programme

WORK EXPERIENCE

- **Microsoft Research India** Bangalore, India
Research Fellow July 2021 - Present
 - **Project 1:** Understanding the ecosystem of BP management in low-resource communities of India
Advisors: [Dr. Mohit Jain](#), [Dr. Bill Thies](#), [Dr. Indrani Medhi Thies](#)
 - * Recruited 21 patients clinically diagnosed with hypertension or hypotension; conducted and analyzed 21 qualitative interviews.
 - * Proposed design recommendations to inform the future of chronic disease management in resource-constrained settings in India
 - * First-author paper accepted in the [TOCHI](#) journal
 - **Project 2:** Understanding the technology-mediated interaction of phlebotomists in India
Advisor: [Dr. Mohit Jain](#)
 - * Identified and recruited stakeholders of the phlebotomists' ecosystem; conducted and analyzed 26 qualitative interviews and 3 observation study
 - * Proposed design recommendations to improve the transparency, trustworthiness, and confidentiality within the phlebotomy ecosystem
 - * Submitted first-author paper to [CSCW 2023](#)
- **Alpine College Of Management and Technology** Dehradun, India
Teaching Faculty July 2018 - July 2019
 - Worked as a Teaching faculty in the mechanical engineering department

FUNDED ACADEMIC RESEARCH

- **Indian Institute of Technology Roorkee** Roorkee, India
User Experience Research Intern June 2020 - July 2020
 - **Project:** Evaluation of urban space from the perception of the elderly to build an **inclusive** neighborhood
 - **Advisor:** [Prof. Saptarshi Kolay](#) (IIT-Roorkee)
 - **Responsibilities:** Created personas, and scenarios; designed survey for the user study containing a total of 65 questions and analyzed the qualitative and quantitative data to design ideas for the active aging of the elderly
- **International Labour Organisation (ILO)** Geneva, Switzerland
Qualitative Research Assistant Sep 2019 - June 2020
 - **Project:** Exploring the experiences of women working in the AI domain in India and understanding the ethical aspects of AI from the perspective of women.
 - **Advisors:** [Dr. Uma Rani](#) (Senior Economist, International Labour Organisation), [Prof. Preeti Mudliar](#) (IIIT-B)
 - **Responsibilities:** Recruited Indian female engineers working in the field of AI as participants through LinkedIn and snowball sampling methodology; designed questionnaire and conducted 24 qualitative interviews with average interview length of 120 min
- **Digital Identity Research Initiative at Indian School Of Business and IIIT-B** Bangalore, India
Research Intern Jan 2020 - June 2020
 - **Project:** Exploring the implication of Aadhar failure and consequential exclusion.
 - **Advisor:** [Prof. Bidisha Chaudhuri](#) (IIIT-B)
 - **Responsibilities:** Performed statistical analysis and generated info-graphics of the qualitative study conducted in South India using MS Excel; documented literature highlighting the biases of biometric technology and Aadhar

PUBLICATIONS

- **Nimisha Karnatak**, Meghna Gupta, and Mohit Jain (2022) “**Understanding the Technology-Mediated Home Phlebotomy Ecosystem in India**” under review at the [ACM Conference On Computer-Supported Cooperative Work And Social Computing](#). (Preprint)
- **Nimisha Karnatak**, Brooke Loughrin, Tiffany Amy Kuo, Odeline Mateu-Silvernail, Indrani Medhi Thies, Bill Thies, and Mohit Jain (2022) “**Is it even giving the correct reading or not?": How Trust and Relationships Mediate Chronic Disease Management in India**” accepted at the [Transactions on Human-Computer Interactions \(TOCHI\)](#). (Preprint)

ACHIEVEMENTS

- Amongst the top 65 students out of over 15000 applicants across India to get selected as a **SPARK summer Intern, 2020** of Indian Institute of Technology, Roorkee (**IIT-R**)
- Won the ‘**Best Presentation Award**’ for my internship work at the SPARK Internship Program of the Indian Institute Of Technology, Roorkee (**IIT-R**) [Certificate Of Appreciation](#) by IIT-R and SPARK

ACADEMIC PROJECTS

- **User research to make mobile payment applications accessible for the visually challenged:** Developed low-fidelity prototype (Braille inscribed on cardboard simulating mobile phone screens) and high-fidelity prototype (by deploying Adobe XD) using design concepts from user research for usability testing
 - Research methodology: qualitative interviews of 30-40 minutes with 11 visually challenged participants using Zoom
 - Usability Testing methods: Think out loud and Participant observation followed by an interview
- **Virtual internship in Product Management:** Performed strategic evaluation of the Microsoft product ‘Workplace Analytics’ on the grounds of software product management and proposed design recommendations under the supervision of Professor Haragopal Mangipudi, Infosys veteran & Finacle creator and Mr. Nishant Rajan, Product Manager at Microsoft.
- **High-fidelity prototype of a virtual classroom application using Adobe XD:** Analyzed the impact of emergency remote learning during COVID-19 among students of IIIT-B using data collected via quantitative and qualitative research
- **Time Series Analysis of Spatial Data for examining the Land Use and Land Cover:** Time Series Analysis of Spatial Data for examining the Land Use and Land Cover of Bangalore using GRASS GIS software for the year 2003,2010,2015 and 2020.
- **Bachelor of Technology Final Year Thesis Project:** Analyzed and compared the temperature and humidity variation between the Earth Energy Enabled Cooling System and Traditional Cooler.

RELEVANT COURSEWORK

- **Master Of Science:** Human-Computer Interaction; Quantitative Research and Qualitative Research; Web and the Mind; Software Product Management; Algorithms; Social Complexity and Systems Thinking; ICT Policy and Regulation; Technology and Society; Application Development for a Connected Society; Geographic Information System
- **Bachelor of Technology:** Work System Design; Automation and Robotics; Internal Combustion Engine; Thermodynamics and Heat Engines; Machine Element Design; Kinematics of Machine; Theory of Machines; Probability, Statistics, and Queuing Models; Industrial Engineering; Engineering Mathematics; Numerical Methods for Engineering, Material Science

SKILLS / TECHNOLOGIES

- **Human Computer Interaction:** User Study, Focus Groups, Prototyping, Wireframing, Adobe XD, Usability Testing and Evaluation, Design Thinking, Accessible and Inclusive design, Personas, Scenarios, Storyboards, Diary study, Survey Design and Sampling, Stakeholder/user interviews
- **Research skills:** Qualitative Research and Quantitative Research, Data Collection and Analysis, Participant Observation, Ethnographic Research
- **Data Analysis skills:** Microsoft Excel, Advanced Statistics, Tableau

POSITIONS OF RESPONSIBILITY

- **NGO: Jivaamrit Khelpur Shermou Roorkee (2018-19):** Volunteered for organic farming awareness among farmers.
- **Indian Red Cross Society (since 2015):**
 - Life member of Red Cross Society since 2015, Volunteered in organizing 5 blood donation 4 health check-up camps.
- **National Service Scheme by Ministry of Youth Affairs & Sports, Government Of India (2014-2017):** Awarded B&C certification for completing 240 & 360 hours of volunteering in 2014-2016 and 2016-2017

EXTRACURRICULAR ACTIVITIES

- Created an Instagram page to create awareness for eating healthy with over 21000 followers [indian_weightloss_recipies](#)
- Selected in Global Leadership Experience Program 2019 organized by Common Purpose in collaboration with King’s College London and IIIT-B
- Winner of Netritva: Leadership Hunt contest 2016, organized by YUVA, The National Youth Awakening Festival.