PRATITI SARKAR
RESEARCHER | UI/UX DESIGNER

- IDC School of Design, IIT Bombay
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Interest Area

Augmented/Virtual Reality, Interaction Design, User Experience Design, Usability Evaluation, Visual Communication, Educational Technology, Game Design

🎓 EDUCATION

2017 - Present

Doctor of Philosophy | IIT Bombay, India | 9.11 CPI
Supervisor: Dr. Jayesh S. Pillai
Thesis Direction: Investigating design strategies for immersive augmented reality based learning in K-12 classrooms

2015 - 2017

Master of Design | IIT Kanpur, India | 9.25 CPI
Thesis: Augmented Reality based Educational Kit to enrich Learning Experience
Supervisor: Dr. Satyaki Roy

2011 - 2015

B.Tech, CSE | IIIT Delhi, India | 8.26 CGPA
B.Tech Project: Character Animation
Supervisor: Prof. Manohar Khushalani

🖊 PUBLICATIONS

Journals

Pratiti Sarkar, Kapil Kadam and Jayesh S. Pillai. Learners' approaches, motivation and patterns to problem-solving on Lines and Angles in Geometry using Augmented Reality. Smart Learn. Environ. 7, 17 (2020).

Surojit Dey and **Pratiti Sarkar.** GO – A Persuasive Mobile Application For Indian Driving Scenario. International Journal of Advance Engineering and Research Development, Volume-04, Issue-01. 2017.

Conferences

Pratiti Sarkar, Kapil Kadam and Jayesh S. Pillai. Collaborative approaches to problem-solving on lines and angles using augmented reality. In 2019 IEEE Tenth International Conference on Technology for Education (T4E) (pp. 193-200). Goa, India: IEEE. 2019.

Pratiti Sarkar, Prabodh Sakhardande, Utsav Oza and Jayesh S. Pillai. Study of Augmented Reality Interaction Mediums towards Collaboratively Solving Open-Ended Problems. In 27th International Conference on Computers in Education (pp. 472-477). 2019.

Pratiti Sarkar and Jayesh S. Pillai. User expectations of augmented reality experience in Indian school education. In Research into Design for a Connected World (pp. 745-755). Springer, Singapore. 2019.

Pratiti Sarkar, Jayesh S. Pillai and Ankita Gupta. ScholAR: A collaborative learning experience for rural schools using augmented reality 819 application. In 2018 IEEE Tenth International Conference on Technology for Education (T4E) (pp. 8-15). Chennai: IEEE. 2018

Navneet Kaur, Rumana Pathan, Ulfa Khwaja, **Pratiti Sarkar**, Balraj Rathod and Sahana Murthy. GeoSolvAR: Augmented Reality Based Application for Mental Rotation. In 2018 IEEE Tenth International Conference on Technology for Education (T4E) (pp. 45-52). IEEE.

Satyaki Roy, **Pratiti Sarkar** and Surojit Dey. DyMAR - Introduction to Dynamic Marker based Augmented Reality using Smartwatch. In International Conference on Augmented Reality, Virtual Reality and Computer Graphics (pp. 448-456). Springer, Cham. 2017.

Surojit Dey and **Pratiti Sarkar**. Augmented reality based integrated intelligent maintenance system for production line. In Proceedings of the 8th Indian Conference on Human Computer Interaction (pp. 126-131). 2016.

Book Chapter	Satyaki Roy, **Pratiti Sarkar** and Surojit Dey. Augmented Learning Experience for School Education. In: Lee N. (eds) Encyclopedia of Computer Graphics and Games. Springer, Cham
Doctoral Consortium	**Pratiti Sarkar.** Designing an augmented reality learning environment for visuospatial thinking in geometry. In Proceedings of the 2020 ACM Interaction Design and Children Conference: Extended Abstracts (IDC '20). Association for Computing Machinery, New York, NY, USA, 34–37.

📖 PATENT AND COPYRIGHT

Patent	Multicolor Interchangeable Flaps and Convertible Form of Bag Patent Application Number: 201611023368
Copyright	2 Shades: A Collaborative/Cooperative Board Game Application Number: 8827/2017-CO/L

💼 INTERNSHIPS

Jun 2016 - Sep 2016	User Experience (UX) Design Intern | Siemens, Bengaluru Integrated seamless experience in Industrial workflow through Smartwatch. Developed concepts and design to provide modern day experience to software architects
May 2014 - July 2014	Systems Department Intern | Delhi Development Authority (DDA) | ASP .Net Training Integration of payment gateway to the web site of Delhi Development Authority (DDA) and other issues related to programming of ASP .Net
May 2013 - July 2013	Research Intern | IIIT Delhi Automated Component Assignment for Bug Reports. Mining Software Repositories using Java programming and Bugzilla Issue Tracking System for Mozilla

🎗 GRANTS

2019 - 2020	SIGCHI Student Travel Grant for one SIGCHI-sponsored conference
2019	Asia-Pacific Society for Computers in Education (APSCE) Merit Scholarship
2019	IEEE Technical Committee on Learning Technology (TCLT) Student Travel Grant
2018	IEEE Technical Committee on Learning Technology (TCLT) Student Travel Grant

🎤 TALKS AND WORKSHOPS

24 April 2020	**Designing an Immersive AR Learning Environment for Geometry Education** Future of Education for Virtual and Augmented Reality (FEVAR) Lab Department of Psychology, Arizona State University
25 January 2020	**Approaches to problem-solving in Augmented Reality based Learning Environment** 7th IIT Bombay ACM SIGCHI Student Chapter Meet, IDC School of Design, IIT Bombay
31 October 2020 - 1 November 2020	**Data Visualisation Tools and Techniques** VikasAnvesh Foundation, Training Series - Module 5
06 November 2020	**DesignAR Classrooms: Towards Designing Augmented Reality Learning Experiences** IndiaHCI 2020 conference (virtual)
09 November 2020	**Towards Designing a Mobile Augmented Reality Learning Experience** IEEE International Symposium on Mixed and Augmented Reality 2020, Brazil (virtual)

💼 SERVICE EXPERIENCES

2020 - 2021	**Chair:** IIT Bombay ACM SIGCHI Student Chapter
2020	**Co-chair:** Student Design Consortium track, IndiaHCI 2020 Conference
2019 - 2020	**Member:** IIT Bombay ACM SIGCHI Student Chapter, Mumbai, India
2019 - Present	**Reviewer:** Technology for Education (T4E 2019), Interaction Design and Children (IDC 2020), CHI 2020 Alt.CHI, NordiCHI 2020, ISMAR 2020, CHI 2021
2019 - 2020	**Design Nominee:** Post Graduate Academic Council (PGAC), IIT Bombay
6 - 8 January 2020	**Event Incharge - Beyond Reality:** IDC Golden Jubilee Design Conference and Alumni Meet, IDC School of Design, IITB
2018 - 2019	**Academic Unit Representative for Academic Affairs (AURAA):** Post Graduate Academic Council (PGAC), IIT Bombay
2018 - 2019	**Department Companion:** Institute Research Scholar Companion Program (IRSCP), IITB
	Student Volunteer:
Nov 2020	IEEE International Symposium on Mixed and Augmented Reality 2020, Brazil (Virtual)
Oct 2020	ACM User Interface Software and Technology Symposium (UIST 2020), USA (Virtual)
June 2020	Interaction Design and Children (IDC 2020) Conference, London Virtual
15 - 16 March 2019	Design Education Symposium, IDC School of Design, IIT Bombay

	Teaching Assistantship:
2019 - Present	Teaching Assistant through Project, IDC School of Design, IIT Bombay
2017 - 2019	Teaching Assistant, Design Programme, IIT Kanpur
Fall 2015	Teaching Assistant for Animation and Graphics Course, IIIT Delhi

ACHIEVEMENTS

2019	**Award:** Exceptional Contribution as AURAA in PGAC 2018 - 2019, IIT Bombay
2017	**Gold Medal:** Best All Rounder Girl Student of Two Year Master's Programme (M.Tech/MBA/M.Des), IIT Kanpur
2016	**Second Prize:** Honeywell Aerospace Design Challenge 2016

RELEVANT COURSEWORK

Advance Courses	Advanced Course in Methods for Child-Computer Interaction ACMCCI'19, IIT Guwahati Summer School 2019 - Write a Paper for CHI 2021, IIT Bombay
Research Methods	Research Methods in Educational Technology, Qualitative Design Research Methods, Quantitative Design Research Methods
Design Related	Instructional Design, Design for Virtual Reality, Designing Games for Children, User Studies, Design Thinking and Research Methods, Form Exploration, Fundamentals of Graphics, Management of Design and Innovation, Typography, Humanizing Digital: making digital work for people

SKILLS

Research Methods	Interview, Focus Groups, Card Sorting, Heuristic Evaluation, Contextual Inquiry, Affinity Mapping, Grounded Theory, Thematic Analysis
Technical Skills	HTML5, CSS3, C#, ASP .Net, C, Java, Python
Software Proficiency	Unity, Figma, Processing, Audacity, Android Studio, LATEX Adobe: Photoshop, AdobeXD, Illustrator, Premiere Pro, InDesign, After Effects Autodesk: 3ds MAX, Maya, Auto CAD