

# Roshni Poddar

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## Experience

July 2024 Present	<b>Microsoft</b> Software Engineer   Azure Stack HCI Team <ul style="list-style-type: none"><li>&gt; Developing and ensuring the quality of an Azure portal feature that enables customers to model on-premises environments and access centralized edge infrastructure monitoring. [React, TypeScript, Playwright]</li></ul>
Jan 2022 July 2024	<b>Microsoft Research</b> Research Fellow & Research Intern   Advisors: <a href="#">Dr. Manohar Swaminathan</a> , <a href="#">Dr. Mohit Jain</a> , <a href="#">Dr. Pratyush Kumar</a> <ol style="list-style-type: none"><li>1. Engineered a video-based Android quiz app featuring single and multiplayer play and sign language quiz creation, co-designed with the Deaf community to facilitate learning of sign Language and English.<ul style="list-style-type: none"><li>&gt; Led a mixed-method research study with 20 Deaf participants to assess usability, analyze gameplay behavior, and explore the learning aspects of the app. Pilot study presented as a <a href="#">poster</a> at ASSETS'23; full <a href="#">study</a> published in the ITU'23 journal.</li></ul></li><li>2. Developed an Android application and a Node.js server to support educational group calls between visually impaired students and teachers, facilitating communication and the delivery of accessible content.<ul style="list-style-type: none"><li>&gt; Implemented an Interactive Voice Response system using FastAPI, enabling children to independently interact with a variety of accessible educational content, including stories, quizzes, and audio games.</li><li>&gt; Constructed a React.js-based website for educators to effectively manage educational content and track student engagement metrics. This platform is implemented in blind schools across three Indian states and is expanding nationwide.</li><li>&gt; Led a two-month remote study with 29 visually impaired children to evaluate the effectiveness of these educational tools and identify potential areas for refinement. <a href="#">Paper</a> at COMPASS'24.</li></ul></li><li>3. Worked with a PhD student at University of Washington on building an accessible video conferencing prototype for mixed hearing groups.<ul style="list-style-type: none"><li>&gt; Conducted in-person user studies and focus group discussions with 18 Deaf and Hard of Hearing participants, 6 interpreters, and 10 hearing individuals. <a href="#">Paper</a> published at ASSETS'23.</li></ul></li></ol>
August 2020 Dec 2021	<b>AI4Bharat</b> Research Intern   Advisor: <a href="#">Dr. Pratyush Kumar</a> <ul style="list-style-type: none"><li>&gt; Used MediaPipe to extract features from Indian sign language videos, trained and evaluated machine learning models (transformer, CNN+ LSTM model, and XGBoost). Achieved 88.44% accuracy on 4287 videos over 263 word signs.</li><li>&gt; Conducted a mixed-methods study involving 15 semi-structured interviews and 131 survey responses to understand the challenges faced by the employed Deaf community in India. <a href="#">Paper</a> published at INTER-ACT'23.</li></ul>

[GitHub](#)

## Education

Aug 2018 May 2022	<b>PES UNIVERSITY</b> B.Tech, Computer Science & Engineering CGPA: 9.17 out of 10	<b>Bangalore, India</b>
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## Honours and Awards

**Microsoft Hackathon, 2022.** Won third place in Hack 2 enable and Hack for Society categories among 10,019 entries

**Microsoft Hackathon, 2024.** Led a 5-member team to win third place in the Hack4Inclusion challenge among 20,249 entries

**Accessibility Lunch Series at Carnegie Mellon University, 2024.** Presented a talk on *Empowering diverse learning for children with vision impairments*, showcasing innovative strategies for inclusive education.

**Prof. CNR Rao Scholarship.** Received merit scholarships for academic excellence during undergraduate studies.

## Skills

<b>Programming Languages</b>	JavaScript, TypeScript, HTML5, CSS, Kotlin (Android development), Python, C++, C
<b>Frameworks &amp; Technologies</b>	React, Next.js, Playwright, FastAPI, Flask, Express.js, PyTorch
<b>Cloud &amp; Database Technologies</b>	Azure Cloud Services, MongoDB, MySQL
<b>Accessibility</b>	Web accessibility, Android accessibility, Screen readers (TalkBack, NVDA)