

# CHARAN PUSHPANATHAN PRABAVATHI

+1(582) 203-8144 | [linkedin.com/in/charanpushpanathan](https://www.linkedin.com/in/charanpushpanathan)

[charanpp1603@gmail.com](mailto:charanpp1603@gmail.com) | | **Portfolio:** [charanpushpanathan.com/minimalistmanual.html](https://charanpushpanathan.com/minimalistmanual.html)

## SKILLS

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<b>UX Research Methods</b>	User Interviews, Usability Testing, A/B Testing, Design Rationale, Field Studies, Participatory Design, Thematic Analysis, and Mixed Methods
<b>UX/UI Design</b>	Information Architecture, Wireframing, Prototyping, User Flows, Interface Design, Accessibility, User-Centered Design
<b>Tools &amp; Software</b>	Figma, Sketch, Adobe XD, InVision, Zeplin, Keynote, HTML/CSS, JavaScript, Python, Data Visualization

## EDUCATION

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<b>Pennsylvania State University, University Park</b>	State College, PA
Master of Science in Informatics, Human Computer Interaction	08/2023 - 05/2025 (Expected)
Advisor: Prof. John M. Carroll	
GPA: 4.0/4.0; Research Focus: Collaborative Systems, Technology-Mediated Interactions	
Relevant Coursework: Research Methods in HCI, Cognitive Science, User and Technology, Applied Machine Learning, Human-Centered AI, XR Interface Design, Intelligent Systems	
<b>Kumaraguru College of Technology, Anna University</b>	Coimbatore, India
Bachelor of Engineering in Computer Science and Engineering	08/2019 - 04/2023
GPA: 8.12/10; First Class	
Relevant Coursework: Data Structures, Algorithms, Database Systems, User Interface Development, Object-Oriented Programming, Machine Learning	

## WORK EXPERIENCE

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<b>HDFC Bank Limited</b>	Mumbai, India
Product Designer Intern	11/2022 - 06/2023
<ul style="list-style-type: none"><li>Spearheaded design for account aggregator financial data sharing and payment systems, achieving 93% User Acceptance Testing success rate and reducing user task completion time by 35%</li><li>Executed comprehensive benchmarking across 8 competing financial products, implementing 12+ visual design enhancements and accessibility improvements for banking services</li><li>Performed 15+ field studies and designed information architecture for digital banking platforms, creating seamless user experiences for 5+ banking journeys used by 70M customers</li><li>Led assistive technology product innovation from ideation to build phase, applying inclusive design principles to improve accessibility for users with diverse needs, increasing accessibility compliance by 40%</li></ul>	
<b>Angel Startup in Capital Market</b>	Bengaluru, India
Founding Designer	08/2022 - 10/2022
<ul style="list-style-type: none"><li>Led design strategy for social learning investment platform, focusing on user-centered interface design and experience mapping across 6 core user flows</li><li>Crafted 5+ interactive prototypes and user flows for funding pitches, creating compelling presentations that secured interest from 2 potential investors</li><li>Executed market research across 3 Indian capital markets including stocks, brokerage, and investment platforms, analyzing 7 competitors to inform design decisions</li><li>Collaborated with 6-person founding team through early funding phases, developing MVP design within 8-week timeline before regulatory changes impacted the business model</li></ul>	

- Designed interfaces for Neo-Banking (20M users), Pay-later features (30M users), and Axis Bank wallet applications, supporting daily transactions
- Performed qualitative analysis through 18 user interviews, 5 field studies, 2 usability tests, and 3 A/B testing methodologies
- Created design iterations based on research insights, improving conversion rates by 22% and increasing user engagement metrics by 18%
- Nominated for Tech Award for contributions to Neo-banking redesign alongside senior designers, recognized as 1st of intern projects

## RESEARCH PROJECTS

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### **Collaborative Systems for Co-Parenting | UX Research, Co-design, HCI**

Led research at Penn State examining co-parenting technology through 10+ design workshops with parent couples. Co-authored DIS and CHILBW 2025 publications based on synthesis of 80+ interdisciplinary research papers.

### **Trust and Decision-Making in XR | Explainable AI, User Research**

Analyzed 89 papers to create framework for AI explanation techniques in XR interfaces, focusing on visualization methods' impact on user trust and ethical implications in Human-AI collaboration.

### **Post and Gather - Campus Event Platform | UX Research, HCI**

Analyzed user behavior with event organizers using Hierarchical Task Analysis to identify 10 critical workflow tasks. Integrated platform serving Penn State's 24 campuses based on evidence-based HCI methodologies.

### **Natural Language Understanding | Conversational AI, UX Design**

Built conversational AI interfaces with arithmetic and web crawling capabilities. Optimized GPT-2 models using PEFT/LoRA and created multimodal system integrating vision, speech, and text processing.

## PUBLICATIONS

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- Li, Y.F., Li, X., Huang, W.H., **Pushpanathan, C.**, Cai, J., Carroll, J.M. (2025). Parental Collaboration and Closeness: A Co-Design Exploration with New Couple Parents. *CHI Conference on Human Factors in Computing Systems* [Under Review].
- **Pushpanathan, C.**, Li, Y.F., Carroll, J.M. (2025). Design Rationale: Co-Ordination System. *Extended Abstracts of the CHI Conference on Human Factors in Computing Systems* [ongoing].

## TEACHING EXPERIENCE

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### **College of Information Sciences and Technology, Penn State**

University Park, PA

Teaching Assistant

- IST 505 - Foundations of Research Design in Information Sciences and Technology (Spring 2025)
- IST 526 - Development Tools and Visualizations for Human-Computer Interaction (Spring 2025)
- IST 402 - Emerging Issues and Technology: Computer Graphics and Virtual Reality (Fall 2024)
- IST 504 - Foundations of Theories and Methods of Information Sciences Research (Fall 2024)

## INVITED TALKS

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### **Kumaraguru College of Technology**

Coimbatore, India

Guest Speaker

- Delivered a presentation on 'Nudge Theory: Influenced Billions of Mobile Users' to over 50 students, clarifying complex concepts and sparking lively discussions (Jan 2023)
- Constructed a detailed presentation on presentation strategies for both venture capital pitches and academic settings, impacting 40+ students and solidifying position as communications expert among peers. (Dec 2022)