JENNIFER CHANDRAN

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SUMMARY

Graduate student in Human-Computer Interaction at Georgia Tech with a strong foundation in computer science and extensive experience in HCI research, backend engineering, and data visualization. Led full-stack app development projects, conducted AR/VR research, and published in top conferences like CHI and IEEE VRW. Seeking a Summer 2026 internship in UX research, software engineering, or data visualization.

EDUCATION

Georgia Institute of Technology – Atlanta, GA
Master of Science, Human-Computer Interaction, College of Computing
Expected Graduation: May 2027 | Graduate Teaching Assistant: Information Visualization Course
Virginia Polytechnic Institute and State University, Blacksburg, VA
Bachelor of Science, Computer Science, College of Engineering
Graduated: May 2025

EXPERIENCE

AR Tool Design for Lawrence Livermore National Lab | Jan 2025 – May 2025

- Developed a Unity-based AR inspection tool enabling real-time 3D defect visualization and annotation.
- Integrated GET/POST requests via Postman to support bi-directional communication between HoloLens headset and web dashboard.
- Implemented device synchronization logic for object state updates and rotation alignment across connected clients.

SmartTrail Project Backend Lead, Virginia Tech CHCI | Apr 2023 – May 2025

- Led backend development of a cross-platform trail companion app used by 30+ hikers; published on both iOS and Android app stores.
- Designed and deployed scalable containerized services using Docker on university-managed infrastructure.
- Built real-time data syncing pipelines and RESTful APIs using Firebase Firestore and Flask. Optimized data fetch and sync logic in Python, reducing API calls by 30%.
- Co-authored CHI 2024 paper analyzing weather-emotion correlations from hiker blogs and ArcGIS data.

Research Assistant – 3d Interaction Group, Virginia Tech CHCI | Nov 2023 – May 2025

- Conducted field study with Microsoft HoloLens to understand public AR use for knowledge work
- Managed participant recruitment, study execution, and qualitative analysis with Taguette
- Co-authored IEEE VRW 2025 paper on user/bystander responses and work effectiveness of virtual monitors

NOTABLE PROJECTS

Threadpool

- Designed a multithreaded thread pool with POSIX threads, featuring work-stealing, bounded queues, and synchronized task execution.

Malloc

- Implemented a custom memory allocator with malloc, free, and realloc, using explicit free lists, block coalescing, and splitting to manage heap memory efficiently.

CUSH Customizable Shell

- Created a Unix-style shell supporting pipelines, job control, forking, and commands like fg, bg, and jobs, with signal handling and terminal access states using POSIX functions.

Personal Server

- Designed a server supporting HTTP 1.1 authentication, file serving, and IPv4/IPv6 compatibility.

Data Visualization

- Scraped hiker blogs and ArcGIS data, analyzed large datasets using Pandas, and developed interactive geographical and population mapping visualizations using JavaScript in Observable.

Other Coursework Projects

- Software Design: Tetris, Schelling Model, Maze Runner
- Computer Organization: Binary Bomb Lab, Cache Simulation
- Data Structures and Algorithms: BST, Hashing, Recursion Projects

SKILLS

- **Programming Languages:** Python, Java, JavaScript, SQL, C
- **Databases:** Relational Databases (SQL), Firestore, Firebase Realtime DB
- **Tools & Frameworks:** Firebase, Flask, React Native, Docker, Unity, Postman, Pandas, Git, Android Studio, Xcode
- **Systems:** Linux, Unix, GDB, x86, RISCV Assembly, Threading, Networking
- **Specialties:** UX Research, Human-Centered Computing, REST APIs, AR/VR, NoSQL, Data Visualization

PUBLICATIONS

IEEE VRW 2024 Co-authored: "Virtual Displays for Knowledge Work: Extending or Replacing Physical Monitors for More Flexibility and Screen Space"

ACM CHI 2024 Co-authored: "Is Long-distance Hiking an Emotional Roller Coaster? Evaluating Emotions and Weather Effects on the Appalachian Trail"

AWARDS & ACTIVITIES

- Dean's List Student 2023–2025
- National Science Foundation's Research Experience for Undergraduates fund recipient 2024
- CEED Peer Mentor 2021-2025