

ANANYA GUBBI MOHANBABU

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RESEARCH INTERESTS

Human-Computer Interaction, Shared Media Accessibility, Multimodal Interfaces

EDUCATION

The University of Texas at Austin

PhD in Computer Science

August 2024 - Present

The University of Texas at Austin

MS Human-Computer Interaction, GPA: 4.0/4.0

August 2022 - May 2024

RV College of Engineering

BE Information Science and Engineering, CGPA: 9.12/10

August 2018 - July 2022

PUBLICATIONS

Context-Aware Image Descriptions for Web Accessibility. **Ananya Gubbi Mohanbabu**, Amy Pavel. ASSETS 2024

Change Management System for Software Production Environments. **Ananya G M.** IJRESM 2022

Augmented Reality Sudoku Solver. **Ananya G M** and Ankit Kumar Singh. ICTSGS-1 2021

RESEARCH

Context-Aware Image Descriptions

Dept. of Computer Science, The University of Texas at Austin, advised by Dr. Amy Pavel

Fall 2023

- Generation of relevant, objective, and context-sensitive image descriptions using augmented vision language models and scores based on spatial and similarity metrics.

Hornsense 2.0: Redefining the Approach to Health Data Visualization

School of Information, The University of Texas at Austin, advised by Dr. Yan Zhang

Summer 2023 - Fall 2023

- Redesign of the Hornsense app to aid participants of 'Whole Communities Whole Health Research' to easily comprehend and visualize their domestic well-being and child development status.
- In the press: <https://bridgingbarriers.utexas.edu/news/whole-communities-whole-health-takes-giving-back-new-level>

Consumer Led Evidence - Amplification Resources Dashboard (cLEARdashboard)

Pitt Clinical and NLP and AI Innovation Lab, University of Pittsburgh, advised by Dr. Yanshan Wang

Summer 2023

- A qualitative research study to better understand the challenges users faced in the purchase process of hearing aid devices.
- Development of a dashboard to facilitate users with visual and hearing disability to make the right choice of OTC hearing aids.

Real-time Image Semantic Segmentation for Autonomous Driving Cars

Dept. of Computer Science, RV College of Engineering, advised by Dr. Mamatha T Jayaprakash

Summer 2019

- Improvisation of Mask-RCNN model for exact pixel classification, and speedy and accurate semantic segmentation.

AWARDS

Third place, UXPA Designathon, 2023, designed an app that analyzed voice recordings of patients to generate personalized prompts using generative AI, as a reminiscence therapy.

Best Outgoing Student, 2022, Department of Information Science and Engineering, RV College of Engineering.

National Talent Search Examination, 2015, National Council of Educational Research and Training, India, State Rank: 20.

State Level Talent Award, 2014, Department of Women & Child Development, Government of Karnataka, India.

Inspire Award, 2013, Department of Science & Technology, Government of India.

EXPERIENCE

Graduate Research Assistant

Department of Computer Science, The University of Texas at Austin

Spring 2024, Fall 2024

Graduate Research Assistant

School of Information, The University of Texas at Austin

Summer 2023 - Fall 2023

Research Assistant

Pitt Clinical and NLP and AI Innovation Lab, University of Pittsburgh

Summer 2023

Teaching Assistant

McCombs School of Business, The University of Texas at Austin

Spring 2023

- General Management & Strategy (Honors.), New Venture Creation (Exec. MBA)
- Moderated classroom discussions on product market research and reviewed students' coursework.

Technology Analyst Spring Intern

Morgan Stanley (Application Infrastructure Team)

Spring 2022 - Summer 2022

- Rebuilt UI of firm's Change Management System. Achieved a 96% reduction in page load time of the system by optimizing SQL queries, and migrating backend to Spring Boot.

Technology Analyst Summer Intern

Morgan Stanley (End User Technology Team)

Summer 2022

- Developed an application through which employees could submit requests for recognition badges in the firm.

COURSEWORK

Undergraduate: Theory of Computation, Human-Computer Interaction, AI & ML, Advanced Statistical Methods, Web Technology, Software Engineering, Social Networks, Graph Theory & Probability Theory, Operating Systems, Design and Analysis of Algorithms, Augmented Reality & Virtual Reality, Brain-Computer Interface

Graduate: Visual Design, Idea to Product, Accessible User Experience, Information Architecture, Usability

SKILLS

Languages: C, C++, Java, JavaScript (Angular, Node.js, Express.js), MySQL, HTML/(S)CSS

Tools: VS Code, Eclipse, XCode, Unity, Figma, Adobe CC, Google Colab, Jupyter

PROJECTS

Augmented Reality Sudoku Solver

TensorFlow.js, OpenCV, C++, Python, WebAssembly

2021

- A web-assembly-based solver that locates a Sudoku puzzle in an image, solves it, and renders the solution onto the original image.
- Takes approximately 70ms to perform the full pipeline (threshold, contour, solver, merge).
- Link: github.com/gmananya/Augmented-Reality-Sudoku-Solver

MathScribe

Python, OpenCV, DCCNN

2021

- A computer vision tool to digitally recognize steps of solving a hand-written mathematical equation and validate them by maintaining the context.
- Link: github.com/gmananya/MathScribe

Organexus

Bootstrap, Node.js, MySQL, Express.js

2020

- A full-stack web application for users to donate and/or source human organs based on availability, match, and priority.
- Link: github.com/gmananya/Organexus