

Nithiya Shree Uppara

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Education

- **Arizona State University (ASU)** **Tempe**
2024-Present
 - *PhD in Psychology* **Tempe**
2024-Present
 - Thesis:** Culture, Cognition and Perception in India and the U.S.
 - Masters in Psychology, GPA: 4/4*
 - Related Courses:** Research Methods, Intermed Statistics, Regressions, Cross-Cultural Psychology **Tempe**
2019-2021
 - Masters in Computer Science with Thesis in Cognitive Science, GPA: 3.93/4*
 - Thesis:** Understanding the effect of image captioning with description on working memory.
 - Related Courses:** Human Computer Interaction, Data Visualization, Data Mining, Data Processing at Scale
- **International Institute of Information Technology - Hyderabad (IIITH)** **Hyderabad**
2013-2017
 - *Bachelor of Technology (HONORS) Computer Science & Engineering, CGPA: 7.18/10.0*
 - Honors:** Building Games for Pattern Recognition Intelligence.
 - Related Courses:** Artificial Intelligence (AI), Statistical Methods in AI, Database Systems, Distributed Systems, Information Retrieval & Extraction, Principles of Information Security, Advanced Computer Networks, Game Design & Engineering

Publications and Presentations

- Uppara, N. S., McDaniel, T., & Venkateswara, H. (2021). Effect of image captioning with description on the working memory. In Lecture Notes in Computer Science. Lecture Notes in Computer Science (pp. 107-120). doi:10.1007/978-3-030-90328-2_7
- Uppara, N. S., Mavalankar, A. A., & Vemuri, K. (2018, June 15). Eye tracking in naturalistic badminton play. Proceedings of the 7th Workshop on Pervasive Eye Tracking and Mobile Eye-Based Interaction. Presented at the ETRA '18: 2018 Symposium on Eye Tracking Research and Applications, Warsaw Poland. doi:10.1145/3208031.3208037

Presentations

- Nithiya Shree Uppara, Jahnvi Nukireddy, Kavita Vemuri. **A new test for pattern matching intelligence for school children and performance analysis with academic grade point.** *In the proceedings of the International Society for Intelligence Research, 2017 (Poster Presentation at McGill University, Montreal, Canada, July 14-16, 2017)*

Research Experience

- **Research Assistant, PI: Dr. Alexandra Carstensen & Dr. Viridiana Benitez** **ASU**
Mar'23-Present
 - *Perception, Cognition, and Culture in India and the U.S.*
 - Designed tasks to understand the impact of culture on cognition, relational reasoning and perception in children and adults in India and the U.S.
- **Research Assistant, PI: Dr. Catherine Tamis-LeMonda** **NYU**
May'25-Present
 - *GlobalBabies*
 - Contribute to the PLAY project by analyzing infant behavioral and environmental data to investigate the quantity, type, and accessibility of toys in home settings.
 - Conduct in-home observational data collection with families in New York City, documenting infant interactions with toys and everyday household objects.
- **Research Assistant, PI: Dr. Jeffrey Sherman** **UC-Davis**
Mar'23-Aug'24
 - *Antisemitism*
 - Designed face recognition study to understand the racial discrimination experienced by Jewish.
- **Graduate Researcher (THESIS), PI: Dr. Hemanth D & Dr. Troy McDaniel** **ASU**
Aug'20-Aug'21
 - *Understanding the effect of image captioning with description on working memory.*
 - Collected various neural images and generated image descriptions to build a game to understand the memory distortion concept in humans.
 - Collected data from the participants by enabling them to play the game at regular intervals of time.

- **Research Assistant, Laboratory for Embodied Cognition, PI: Dr. Arthur Glenberg** **ASU**
EMBRACE Project *Jan'20–Jan'21*
 - Revamped the reading comprehension intervention for emerging readers within the *EMBRACE* project, an iPad app designed to enhance children's cognitive development by fostering embodied mental models during reading.
- **Research Assistant, Center for Cognitive Ubiquitous Computing, PI: Dr. Troy McDaniel** **ASU**
PERACTIV, a novel wrist-worn camera device. *May'20–Sep'20*
 - Collected data from our lab designed wrist-worn wearable haptic device to detect grasping interactions to benefit individuals with disabilities.
 - Designed and developed a website for processing the collected data and contextual image tagging the data.
- **Research Assistant, Centre for Cognitive Science, PI: Dr. Kavita Vemuri** **IITH**
Decoding (un)known opponent's game play, a real-life badminton eye tracking study, *May'17–Aug'17*
 - The objective is to form a model that estimates optimal gaze patterns and time duration.
 - Studied the differences in the decision-making process in badminton players when playing against professional and amateur opponents using the visual information obtained from Tobii eye-tracking glasses.
- **Research Project (HONORS), PI: Dr. Kavita Vemuri** **IITH**
Building Games for Pattern Recognition Intelligence *Aug'15–Aug'17*
 - Designed and implemented an online serious game correlating some patterns from Standard Raven's IQ test questions to the patterns in nature, using Unity.
 - Conducted Standard Raven's IQ test on 4th and 5th standard students. Analyzed the scores obtained in the game with the Standard Raven's IQ set scores.
- **Research Assistant, Centre for Cognitive Science, PI: Dr. Kavita Vemuri** **IITH**
Analyzing the abilities of Dementia patients *May'15–July'15*
 - The main motive of the project is to help dementia patients remember basic information about themselves such as their name, phone number, and address.
 - Designed a serious game to enhance the abilities of Dementia patients.

Professional Experience

- **Software Development Engineer, Aurora MySQL - Amazon** **Sep'21–Sep'23**
 - Built infrastructure tools to conduct tests, deploy, and release the latest versions of Aurora MySQL Engine.
 - Designed and developed an end-end product called the Health Monitoring System for the team to manage the resources used for MySQL Engine Release, such as deployment hosts, Test on Demand hosts, etc.
- **Teaching Assistant (TA) - ASU** **Aug'20–Mar'21**
 - Worked as a TA for CSE 598: Introduction to Deep Learning in Visual Computing under Dr. Hemanth D.
 - Worked as TA for FSE 100: Introduction to Engineering.
 - Designed quizzes, knowledge checks, assignments, and exam questions for the course. Built an auto grader to evaluate some of the course assignments.
- **Research Aid - Knowledge and Insights (KI), ASU** **Aug'19–May'20**
 - Analyzed and visualized ASU student's data to understand email trends.
 - Implemented a web crawler to get information on all ASU courses to understand student trends for the course.
- **Information Security Analyst - Visa Inc Technology Center, Bangalore** **Aug'17–May'18**
 - Automated data loading for all the disconnected applications enrolled in Oracle Identity Manager (OIM) and achieved a run time of 5 secs to load all the applications into the system.
 - Developed a website in Django to manage different OIM servers used by the company.
 - Worked as a key member in conducting User Access Re-validation (UAR).
- **Teaching Assistant (TA) - IITH** **Aug'15–May'17**
 - Worked as a TA for Functional Analysis, Operating Systems, and Theater Arts.
 - Designed assignments for 250 students and evaluated them weekly.
 - Conducted tutorial sessions to help clarify the questions for the students in the subject area.

Academic Projects

○ Image Book Search Application:

- Designed and developed an Android application leveraging Google OCR and Bing Search Engine, enabling users to search for books based on book images with an avg response time of just 1sec.

○ Wikipedia Search Engine:

- Engineered a highly efficient Python search engine to query a vast archive of 42GB-sized Wikipedia documents.
- Leveraging secondary indexing and two-phase merge-sort techniques, the system ensures optimal performance.
- Implemented and tested TF/IDF-based heuristics to rank relevant wiki pages, resulting in an impressive avg response time of just 500 msec.

○ Reverse Auctioning Engine:

- Developed a reverse auctioning engine capable of identifying software robots acting as auctioning agents.
- Conducted in-depth analysis of the bidding data and extracted key differentiating features between humans and robots.
- Employed an ensemble of three classifiers—Random Forest Classifier, Bagging Classifier, and Logistic Regression—trained on these features to effectively differentiate between human and robot agents, achieving exceptional performance in testing.

○ Automated Tag Recommendation for Stack Overflow:

- Implemented an automated tag recommendation system using a reference paper by Avigitt K. Saha, Ripon K. Saha, Kevin A. Schneider.

Technical Skills

Operating Systems:

Linux (Ubuntu), Windows, Android

Programming Languages:

Java, C++, C, Objective-C, C#, Matlab

Scripting Languages:

Python, Bash, PHP, JavaScript

Cloud Technologies:

AWS (Aurora, EC2, S3, DynamoDB, CloudWatch, Lambda)

Web Frameworks & Tools:

Flask, Unity, Django, Node.js, React.js, PostgreSQL, MongoDB

Certifications:

Deep Learning Specialization, Introduction to C# Programming and Unity, C# Programming and Unity

Others:

Google Suite, Microsoft Suite

Honors and Awards

2024-2025 : **ASU Graduate Student Government (GSG) Travel Grant, (\$750)**

2024-2025 : **Global Education Office (GEO) Scholarship at ASU, (\$2000)**

2019-2021 : **Badass Women of ASU** for *excelling in academics and, participating and leading different clubs and organizations on campus.*

2015-2017 : **Research Award** for *fostering research at undergraduate level.*

2016-2017 : **Dean's Award for Academic Excellence** for *being in the top 15th percentile students.*

Leadership and Volunteering Positions

○ Assembly Member, Graduate Student Government, ASU (2025-Present):

- Serve on the **Leadership & Professional Development Committee**, contributing to initiatives that support graduate student leadership growth and professional skill development across ASU. Participate in reviewing and evaluating graduate student grant applications to support research and professional development opportunities.
- Member of the **Internal and External Affairs Committee**, helping strengthen engagement and communication between graduate students, university administration, and external stakeholders.

○ Mentor, Future for Kids (2019-2021, 2025-Present):

Engaged closely with a small group of youth aged 8-12, offering consistent support on a weekly basis in the domains of academics and athletics. Fostered a positive and nurturing environment to empower these young individuals in their personal growth and development.

○ President, Indian Student Association (ISA) (2019-2021):

Effectively managed and coordinated all events catered to Indian students at ASU. Spearheaded a remarkable cultural event held at ASU Gammage, drawing in more than 2500 enthusiastic participants to celebrate and showcase the vibrant Indian culture.

- **International Student Ambassador (2020-2021):** Dedicatedly assisted incoming students by providing comprehensive guidance and resolving queries pertaining to ASU admissions and facilities. Played a pivotal role in facilitating a smooth transition for students arriving in the USA, ensuring their seamless adjustment to campus life and beyond.
- **ASU Global Guides Mentor (2019-2021):** Served as a dedicated student mentor to an incoming international student, providing valuable insights into the facilities and resources available at ASU. Maintained regular meetings to address any concerns or challenges faced by the mentee and offered guidance and support to resolve them effectively.
- **Logistics Manager, Coalition of International Students (CIS) (2019-2020):** Successfully orchestrated large-scale events, including the spectacular International Night, attracting an impressive gathering of over 6000 participants.
- **Grant Reviewer, Graduate & Professional Student Association (GPSA) (2019-2020):** Conducted meticulous evaluations of applications for Teaching Excellence and Research Excellence Awards, contributing essential feedback to the organizing committee. Ensured an impartial and thorough review process to honor outstanding contributions in academia.
- **Food & Stall Manager, IIIT-H (2015-2017):** Effectively oversaw and managed vendors responsible for food service at various dining halls throughout the campus. Conducted regular quality checks to ensure the high standards and consistency of the food being served.