

Anuja Tayal

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EDUCATION

University of Illinois, Chicago, United States
PhD in Computer Science

Aug 21 - Present

- **Advisor:** Dr. Barbara Di Eugenio
- **Relevant Courses:** Natural Language Processing, HealthCare/Biomedical NLP, Causal Inference, Graph ML, User Design Research Methodology

The LNM Institute of Information Technology, India
Bachelor in Computer Science

Aug 11 - May 15

RESEARCH AND INDUSTRIAL EXPERIENCE

R&D Data Scientist Intern in NLP - PhD, P&G

Jun 23 - Aug 23

- Used Dynamic Shot Prompting in ChatGPT to create Suggestion Question Generator
- Address the challenge of formulating suggestion questions in low-resource settings taking the help of retrieval augmented system

Research Assistant, UIC

May 22 - Present

- Exploring conversational architectures that deliver self-care information to African American patients with heart failure.
- Proposed a neuro-symbolic dialogue system to help heart failure patients monitor salt intake.
- Examined different prompting strategies for LLMs to generate synthetic conversations in the absence of patient-oriented self-care dialogues.
- Conducted a user study with African American Heart Failure patients to understand how they perceive information by asking them to interact with 2 versions of dialog systems.
- Exploring different ways to combine the strengths of task-oriented dialog systems (TODS) and LMs/LLMs to create a hybrid dialog model.

ML Engineer at Intain, India

Aug 19 - July 21

- Worked on extracting relevant information from diverse, unstructured documents.
- Designed and implemented automated deep learning language models to extract key attributes.
- Developed a deep learning model to verify customer signature.

Researcher, Indian Institute of Technology (IIT), Indore
Mentors: [Dr. Neminath Hubballi](#), [Dr. Maitreya Natu](#)

July 16 - Aug 18

- Any unchecked failure/congestion in Computer Networks can bring whole network down.
- Considered the problem of selecting probes to identify faults in computer networks that adapt to traffic dynamics
- Modeled traffic behavior and Detected Malware using flow analysis techniques
- Profiled communication pattern of normal and malicious users by formulating graph based machine learning problem to infer the malicious flows of botnet communications which exhibit uniform behavior otherwise.

Software Developer, R&D Department, AMDOCS, Pune

June 15 - June 16

PUBLICATIONS

Anuja Tayal, Devika Salunke, Barbara Di Eugenio, Eulalia Puig Abril, Paula Allen-Meares, Carolyn Dickens, Olga Garcia-Bedoya, Andrew Boyd, Conversational Assistants to support Heart Failure Patients: comparing a Neurosymbolic Architecture with ChatGPT In ACL'25 ([Submitted](#) Feb 2025) [[Paper](#)]

Anuja Tayal, Devika Salunke, Barbara Di Eugenio, Eulalia Puig Abril, Paula Allen-Meares, Carolyn Dickens, Olga Garcia-Bedoya, Andrew Boyd, Towards conversational assistants for health applications: using ChatGPT to generate conversations about heart failure In Sigdial’25 ([Accepted April 2025](#)) [[Paper](#)]

Devika Salunke, **Anuja Tayal**, Barbara Di Eugenio, Paula G. Allen-Meares, Carolyn A. Dickens, Olga Garcia-Bedoya, Eulàlia P. Abril, Andrew D. Boyd, Preliminary Findings From A Comparative Study of GPT and Neuro-symbolic Models in Salt Content Information Delivery In AMIA 2025 Clinical Informatics Conference ’25 ([Accepted February 2025](#)) [[Paper](#)]

Anuja Tayal, Barbara Di Eugenio, Devika Salunke, Andrew D. Boyd, Carolyn A. Dickens, Eulalia P. Abril, Olga Garcia-Bedoya and Paula G. Allen-Meares, A Neuro-Symbolic Approach to Monitoring Salt Content in Food In CL4Health workshop, LREC-COLING’24 ([Accepted March 2024](#)) [[Paper](#)]

Devika Salunke, **Anuja Tayal**, Barbara Di Eugenio, Paula G Allen-Meares, Carolyn A Dickens, Olga Garcia-Bedoya, Eulalia P Abril, Andrew D Boyd, Assessing Bias In ChatGPT’s simulated clinical responses In Mitigating AI Risk through Ethical Data Science workshop, AMIA ([Accepted Oct 2023](#))

Anuja Tayal, Aman Tyagi, Dynamic Contexts for Generating Suggestion Questions in RAG Based Conversational Systems In PromptEng 2024 workshop, WWW ([Accepted March 2024](#)) [[Paper](#)]

Denisa Gandara, Hadis Anahideh,Matthew Ison & **Anuja Tayal**, Inside the Black Box: Detecting and Mitigating Algorithmic Bias across Racialized Groups in College Student-Success Prediction. In Education Researcher ([Submitted Nov 2022](#)) [[Paper](#)]

Anuja Tayal, Neha Sharma, Neminath Hubballi & Maitreya Natu. Traffic Dynamics- Aware Probe Selection for Fault Detection in Networks. In Journal of Network and Systems Management (2020) [[Paper](#)]

Anuja Tayal, Neminath Hubballi, Maitreya Natu & Vaishali Sadaphal. Congestion-Aware Probe Selection for Fault Detection in Networks. In 10th International Conference on Communications Systems and Networks (COMSNETS 2018), Bangalore, India. [[Paper](#)]

Anuja Tayal, Neminath Hubballi, & Nikhil Tripathi. Communication Recurrence and Similarity Detection in Network Flows. IEEE Advanced Networks and Telecommunications System (IEEE ANTS 2017) [[Paper](#)]

ACHIEVEMENTS	<ul style="list-style-type: none"> Defended my Thesis Proposal June’25 Creating AI-Enabled Health Team Data Fabric Hackathon Team won 2nd place <ul style="list-style-type: none"> Developed Discharge Pathfinder, an LLM tool that streamlines NICU discharge by simplifying medical jargon to support caregivers and improve patient outcomes. May’25 Reviewer: LREC-COLING’24, COLING’25, ARR July’24-Present CRA-WCP Grad Cohort for Women Travel Award’23, GHC Scholar’24, MSLD’25 Conference Volunteering: EMNLP’22, EACL’23, NAACL’24
TEACHING ASSISTANT	<ul style="list-style-type: none"> Mathematical Foundations of Computing Jan’25-May’25 Languages and Automata Jan’22-May’22 Program Design-II Aug’21-Dec’22 Computer Organization and Architecture(COA) Aug’10-Dec’10