

Hridayesh Lekhak

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EDUCATION

The University of Texas at Arlington

BS Computer Science (*Junior*)

Arlington, TX

Aug 2023 - May 2027

RESEARCH EXPERIENCE

Arlington Computational Linguistics Lab (Research Group Member)

Fall 2023 - Present

<https://uta-acl2.github.io/index.html>

Research Focus: Animal Vocalization and Language Processing

- Contributed to the design and development of multiple research projects, creating novel datasets and building machine learning models for analyzing canine vocal communication. Dedicated to this work during summer and semester breaks, which resulted in multiple publications in top-tier conferences on topics including phonetic discovery, emotional analysis, and longitudinal studies of dog barks.

PUBLICATIONS

- Hridayesh Lekhak**, Tuan M. Dang, Theron S. Wang, and Kenny Q. Zhu. 2025. A Data-driven Approach to the Longitudinal Study of Canine Vocal Pattern Development. *In Proc. ACM MM '25 (Brave New Ideas)*.
- Hridayesh Lekhak**, Theron S. Wang, Tuan M. Dang, and Kenny Q. Zhu. 2025. DogSpeak: A Canine Vocalization Classification Dataset. *In Proc. ACM MM '25 (Datasets Track)*.
- Tuan M. Dang, Theron S. Wang, **Hridayesh Lekhak**, and Kenny Q. Zhu. 2025. EmotionalCanines: A Dataset for Analysis of Arousal and Valence in Dog Vocalization. *In Proc. ACM MM '25 (Datasets Track)*.
- Theron S. Wang, Xingyuan Li, **Hridayesh Lekhak**, Tuan M. Dang, Mengyue Wu, and Kenny Q. Zhu. 2025. Toward Automatic Discovery of a Canine Phonetic Alphabet. *In Proc. ACL 2025* (Outstanding paper award).

WORK EXPERIENCE

Computer Science and Engineering at UT Arlington

Arlington, TX

Web Developer

Nov 2023 - Present

Supervisor: Dr. Chengkai Li

- Developed and deployed several Flask-based web applications for the department with SQL databases and Azure hosting. Migrated most of the legacy CSE web applications from PHP to Python.
- Responsible for managing departmental web applications including the CSE Colloquium, Faculty Candidate Review, GTA Evaluation, Ph.D. Milestone, Ph.D. Annual Review, Room Management, and Tenure and Promotion applications.
- Improved website-wide search query performance by over 90% using a caching mechanism.

SilverLine System Integrators Pvt. Ltd.

Kathmandu, Nepal

Junior Full Stack Developer

Dec 2022 - Jun 2023

- Spearheaded the development of 5+ full-stack applications using Django and Flask for the fintech startup.
- Designed and implemented backend systems, including APIs and authentication mechanisms for point-of-sale devices.
- Built responsive front-end interfaces with ReactJS and NextJS, and managed SQL databases. Also responsible for deploying to our cloud servers.

AWARDS

UTA CSE Departmental REU Grants (Spring 2024, Fall 2024)

CSE Department, UTA

Received two consecutive research grants for projects in the emerging field of animal language processing under the supervision of Dr. Kenny Zhu.

SKILLS

Programming:	Python, JavaScript, TypeScript, Java, SQL, PHP, C
Frameworks/Tools:	Next.js, React, Flask, Django, Node.js, Express, Jinja, Postman
Databases:	MongoDB, SQL, SQLite, Redis
Other Skills:	Full Stack Development, Machine Learning, OpenCV, REST, Automation, GraphQL, Git, Nginx, Linux, Agile Development, Data Scraping