LAKSHITA DODEJA

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EDUCATION

Georgia Institute of Technology **Atlanta, USA**
Masters in Computer Science, **GPA: 4.0/4.0** (Aug' 21 –Present)
Specialization – Computational Perception and Robotics
National Institute of Technology (NIT) **Kurukshetra, India**
B.Tech. (Hons) Computer Science, **GPA: 9.35/10** (Aug' 14 – May' 18)
Graduated as one of the top 10 students in the department

PUBLICATIONS

1. **Lakshita Dodeja*,** Pradyumna Tambwekar*, Erin Hedlund-Botti, and Matthew Gombolay. "Towards the design of user-centric strategy recommendation systems for collaborative Human-AI tasks" (In Progress) (* denotes equal contribution)
2. Pradyumna Tambwekar, Nathan Vaska, **Lakshita Dodeja**, Matthew Gombolay (2022). A Computational Interface to Translate Unstructured Commander's Intent into a Machine Readable Specification *(Under Review)*
3. Palak Garg, **Lakshita Dodeja**, Priyanka, Mayank Dave (2019). "Hybrid color image watermarking algorithm based on DSWT-DCT-SVD and Arnold transform." *Advances in signal processing and communication*. Springer, Singapore, 2019. 327-336.

RESEARCH EXPERIENCE

Graduate Student Researcher, Advisor : Dr Matthew Gombolay, Georgia Tech (Aug' 21 – Present)
Studying Human Preferences for specifying strategies
- Currently leading a user study to understand how humans like to specify and come up with strategies
- This highly comprehensive study spans across ~100 participants

Extracting Goals and Constraints from Strategy descriptions
- Worked on a project to convert natural language strategy to goals and constraints for board game RISK using various NLP concepts including seq2seq architecture and transformers
- Our Natural Language Model performed significantly better than Humans in inferring intent

Undergraduate Researcher, Advisor : Dr Mayank Dave, NIT Kurukshetra (Aug' 17 – Apr' 18)
Digital Image Watermarking
- Developed a new algorithm for digitally watermarking colored images using Discrete Stationary Wavelet Transform (DSWT), Singular Value Decomposition (SVD), Discrete Cosine Transform (DCT) and Arnold Transform
- Published paper *"Hybrid Color Image Watermarking Algorithm Based on DSWT-DCT-SVD and Arnold Transform"* in **Springer**

Wireless Sensor and Actor Networks
- Simulated an energy-efficient rekeying mechanism for clustered WSAN and compared it with Sequence Based Key Management Scheme (SKM). Energy consumption of key refresh operations also dropped by 34% in single-hop networks and 10% for multi-hop networks

WORK EXPERIENCE

Graduate Teaching Assistant, Georgia Tech **Atlanta, Georgia**
Course – Robot Intelligence and Planning (Jan'22 – May'22)
- Grading assignments and clearing doubts for a class of 100 students

Amazon Development Centre **Bangalore, India**
Amazon Prime Verification Team
Software Development Engineer – II (Oct'20 – July'21)
Plug and Play Verification
- Developed plug and play widgets for customer segment verification throughout Amazon.
- Designed a generic and reusable flow of providing the verification widgets to the customers

Software Development Engineer - I (Jun' 18 – Sep'20)
Veteran Identity Realtime Verification
- Led the development of a real time veteran identity verification software for veteran day
- Integrated our system with a third party for verifying data and performed various performance and load tests

Manual Document Verification
- Conceptualized, designed and developed a process for manual document verification
- Configured secure storage of documents, structured the Data Access Object and built the flow for Customer Service Agents to verify the documents

PROJECT EXPERIENCE

- Trained agents using Language and Vision Conditioned Imitation Learning on BabyAI to achieve better performance than FiLM for more complex levels (2021)
- Developed a NLP model to detect social biases in language using reddit and twitter data (2022)
- Developed a NLP model to predict if an argumentative essay was effective in its writing (2022)

Languages Skills – Python, R, C, C++, Java, Perl, HTML, Javascript, SQL