

# LAKSHITA DODEJA

## EDUCATION

### Georgia Institute of Technology

Masters in Computer Science, **GPA: 4.0/4.0**

Specialization – Computational Perception and Robotics

**Atlanta, USA**

(Aug' 21 – Present)

### National Institute of Technology (NIT)

B.Tech. (Hons) Computer Science, **GPA: 9.35/10**

Graduated as one of the top 10 students in the department

**Kurukshetra, India**

(Aug' 14 – May' 18)

## RESEARCH EXPERIENCE

### Graduate Student Researcher, Georgia Tech

(Aug' 21 – Present)

*Human Robot Interaction, Advisor : Dr Matthew Gomobolay*

- 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
- Conducting a user study to understand how humans like to specify and come up with their own strategies

### Undergraduate Researcher, 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 WSN 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

### Summer Research Intern, IIT Hyderabad

(May' 16 – Jul' 16)

- Compared performance of YouTube over MPTCP vs WLAN vs LTE
- Developed an app to estimate the Quality of Experience (QoE) of the user in terms of Mean Opinion Score (MOS)
- Recorded a 34.4% better MOS than LTE and 20.4% better MOS than WLAN for MPTCP

## 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

*Student Identity Realtime Verification*

- Developed a comprehensive reusable system in java for real-time verification for student identity
- The new system helped reduce illegal signups of prime student program and provided a smooth user experience with reduced average latency of 2 seconds

## 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)
- Study on adversarial attacks and defences for monocular depth estimation (2021)
- Represented NIT Kurukshetra in the grand finale of **Smart India Hackathon**, organized by the Prime Minister and developed an application for visually impaired people to perform various functions on computer. (2018)

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