

# Bhavyesh Sajja

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## EDUCATION

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### National University of Singapore

Doctor of Philosophy, Computer Science

*Advisors: Dr Roger Zimmermann, Dr Tan Zhi Xuan*

GPA: **4.75/5.00**

Aug 2025 – Present

### University of Southern California

Master of Science, Computer Science

GPA: **4.00/4.00**

Aug 2023 – May 2025

### National Institute of Technology Delhi

Bachelor of Technology, Computer Science and Engineering

*President's Gold Medalist for the highest GPA across all majors*

GPA: **9.41/10.00**

Aug 2019 – Jun 2023

## EXPERIENCE

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### MMRL, CoSI Lab

Singapore

PhD Student (*Advisors: Dr Roger Zimmermann, Dr Tan Zhi Xuan*)

Nov 2025 – Present

- Developing cooperative infrastructures for situations involving self-interested agents
- Interested in automated negotiation, and norms – emergence, learning, and compliance

### Integrated Media Systems Center

Los Angeles, USA

Research Assistant (*Advisor: Dr Seon Ho Kim*)

Aug 2023 – May 2025

- Built a robust nighttime object detection pipeline; benchmarked real-world semi-supervised detection

### Palanam Technology Pvt. Ltd.

New Delhi, India

Research Intern

Sep 2022 – May 2023

- Developed a novel 3D attention mechanism to promote robustness in violent video content detection

## SELECTED PUBLICATIONS

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Object Detection in Real-World Smart City Applications: A Case of Truck Detection in California Highways

*Bhavyesh Sajja, Wenting Qiu, Jooyoung Yoo, Seon Ho Kim. DASC@ICDE 2025*

Detection of Violent Content in Videos Using Attention-Augmented 3D Convolutional Networks

*Bhavyesh Sajja, Anurag Singh. IEEE MultiMedia*

Impact of Noise in Large Real-World Datasets on Semi-Supervised Object Detection: A Case Study of Homeless Encampments Detection

*Bhavyesh Sajja, Seon Ho Kim. IEEE BigData 2024*

## PROJECTS

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### Bayesian Reciprocation in LLMs [\[Report\]](#)

Tested LLMs' ability to rationally cooperate with different game-theoretic player types

### Multi-Agent Social Interaction Simulation [\[Report\]](#)

Developed game-theoretic simulations to study interaction patterns among steered LLM agents

## SKILLS

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Python, C++, Julia, OpenRLHF, PyTorch, NumPy, HuggingFace, Transformers, Docker, Go