Siddarth Chandrasekar

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Education

University of Alberta — Edmonton, Canada
PhD in Computing Science — *Sep 2026 – Present*
Master's in Computing Science GPA: 3.8 / 4 — *Sep 2024 – Aug 2026*
Supervisor: Marlos C. Machado

Indian Institute of Information Technology, Design and Manufacturing — Kancheepuram, India
Bachelor of Technology in Electronics and Communication, GPA: 8.61 / 10 — *Jul 2018 – Jun 2022*

Research Experience

RBCDSAI, IIT Madras — Chennai, India
Post Baccalaureate Researcher — *Oct 2022 – Jul 2024, Full-time*

- Worked on representation learning for state-action abstraction and hierarchical RL
- Developed an unsupervised learning-based solution for Apple, leading to a 2% boost in yield

SPIRE Laboratory, IISc — Bangalore, India
Undergraduate Research — *May 2021 – Apr 2022, Internship*

- Studied the influence of formant transitions on the perception and classification of stop consonants
- Developed a web tool that visualizes mouth movements from speech via acoustic-to-articulatory inversion

NLP Group, IIT Patna — Patna, India
Undergraduate Research — *Mar 2021 – Nov 2021, Internship*

- Developed a federated meta-learning model for multi-modal complaint detection
- Developed a double-sided adaptive optimization federated learning algorithm

Publications

Conference

C1. Chandrasekar, S., & Machado, M. C. (2026). The Laplacian Keyboard: Beyond the Linear Span. *Neural Information Processing Systems (NeurIPS)*, 2026 *(to be presented)*.

C2. Tse, H. T., Chandrasekar, S., & Machado, M. C. Reward-Aware Proto-Representations in Reinforcement Learning. *Neural Information Processing Systems (NeurIPS)*, 2025.

C3. Singh, A., Chandrasekar, S., Saha, S., & Sen, T. Federated Meta-learning for Emotion and Sentiment Aware Multi-modal Complaint Identification. *Empirical Methods in Natural Language Processing (EMNLP)*, 2023.

C4. Kunjir, M., Chawla, S., Chandrasekar, S., Jay, D., & Ravindran, B. Optimizing Traffic Control with Model-based Learning: A Pessimistic Approach to Data-efficient Policy Inference. *Knowledge Discovery and Data Mining (KDD)*, 2023.

C5. Chandrasekar, S., Ramesh, A., Purohit, T., & Ghosh, P. K. A Study on the Importance of Formant Transitions for Stop-consonant Classification in VCV Sequence. *Interspeech*, 2023.

C6. Udupa, S., Chandrasekar, S., & Ghosh, P. K. Improved Acoustic-to-articulatory Inversion using Representations from Pretrained Self-supervised Learning Models. *International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, 2023.

Workshop

W1. Chandrasekar, S., & Machado, M. C. Towards An Option Basis To Optimize All Rewards. *Workshop on Reinforcement Learning Beyond Rewards, Reinforcement Learning Conference (RLC)*, 2025. (*Spotlight*)

W2. Chandrasekar, S., Udupa, S., & Ghosh, P. K. Watch Me Speak: 2D Visualization of Human Mouth during Speech. *Show and Tell, Interspeech*, 2022.

Journal

J1. Singh, A., Chandrasekar, S., Sen, T., & Saha, S. Federated Multitask Learning for Complaint Identification using Graph Attention Network. *IEEE Transactions on Artificial Intelligence*, 2023.

Awards

Alberta Graduate Excellence Scholarship (AGES), Government of Alberta — *Dec 2026*

Graduate Recruitment Scholarship, University of Alberta — *Sep 2026*

Teaching Experience

University of Alberta — Edmonton, Canada
Teaching Assistant — *Fall 2024 – Present*

- CMPUT 365 – Introduction to Reinforcement Learning (Fall 2025, Winter 2026)
- CMPUT 267 – Machine Learning I (Winter 2025)
- CMPUT 175 – Introduction to Foundations of Computing II (Fall 2024, Fall 2026)

Indian Institute of Technology, Madras — Chennai, India
Teaching Assistant — *Fall 2023*

- CS6700 – Reinforcement Learning

NPTEL (IIT Madras) — Online
Teaching Assistant — *Winter 2023 – Summer 2023*

- Introduction to Machine Learning (Tamil)

Skills

- **Programming:** Python, Bash/Shell, LaTeX
- **ML/DL Frameworks:** JAX, Flax (NNX), Optax, PyTorch, NumPy, Matplotlib
- **RL Environments & Simulation:** MuJoCo, Brax, DeepMind Control Suite, OGBench
- **HPC & Tooling:** SLURM / Compute Canada, Git, Linux
- **Research Areas:** Reinforcement Learning, Representation Learning, Spectral & Laplacian Methods, Hierarchical RL, Zero-shot & Few-shot RL, Behavioral Foundation Models
- **Languages:** English, Tamil

Last updated: November 26, 2026