Ithaca, NY 14850 https://yash-s20.github.io

YASH SHARMA

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EDUCATION

Cornell University Ithaca, NY Aug 2022 – May 2024

• Master of Science in Computer Science (Thesis Track) GPA: 4.0 / 4.0, Minor in Cognitive Science

(ongoing)

• Graduate courses: Computational Sustainability, Advanced Topics in ML, Advanced Programming Languages

Aug 2017 – May 2021

• Bachelor of Technology in Computer Science & Engineering with Honors, Minor in Artificial Intelligence & Data Science

• GPA: 9.68 / 10, Honors GPA: 10 / 10, Minor GPA: 9.4 / 10

WORK EXPERIENCE

Software Engineer, Samsung Electronics

Indian Institute of Technology Bombay

Suwon, South Korea

Mumbai, India

Sep 2021 - Aug 2022

- Key role in developing high-performance, low-latency physical layer for 5G wireless communication as a member of Physical Uplink Shared Channel team, focusing on core-cycle and cache bottleneck optimization.
- Utilized Intel®Intrinsics (AVX-512) for efficient parallel processing of data
- Reduced bottlenecks in uplink signal processing pipeline to achieve upto 20% speedup

Network Engineer Intern, Samsung Electronics

remote

Jun 2020 - July 2020

 Built an automated network load testing framework using Locust & Kubernetes to evaluate performance of Samsung's in-production load balancing services

Summer Research Intern, TU Braunschweig

Braunschweig, Germany

May 2019 - July 2019

· Built WeLineation, a full-stack app using Expectation Maximization for sclera segmentation from crowd-sourced data

TEACHING ASSISTANTSHIPS

CS3410: Computer System Organization & Programming	Cornell University	Fall 2023, Fall 2022
CS4820: Introduction to Analysis of Algorithms	Cornell University	Summer 2023
CS2770: Excursions in Computational Sustainability	Cornell University	Spring 2023
CS251: Software System Lab	IIT Bombay	Fall 2020, Fall 2019
MA105: Calculus	IIT Bombay	Fall 2018
		Won TA awards for Fall 2020 and Fall 2022

PUBLICATIONS

- Demo2Code: From Summarizing Demonstrations to Synthesizing Code via Extended Chain-of-Thought H. Wang, G. Gonzalez, Y. Sharma, S. Choudhury [NeuRIPS 2023]
- Improving low resource code-switched ASR using augmented code-switched TTS Y. Sharma, B. Abraham, K. Taneja, P. Jyothi [INTERSPEECH 2020]
- WeLineation: crowdsourcing delineations for reliable ground truth estimation S. Goel¹, Y. Sharma¹, M.L. Jauer, T.M. Deserno [SPIE Medical Imaging 2020]

RESEARCH EXPERIENCE

MS Thesis Research - Prof. Sanjiban Choudhury

Cornell University

Feb 2023 – (ongoing)

Leveraging vision-language models and GPT-4 for allow human to robot skill transfer through demonstrations

Undergraduate Thesis - Prof. Preethi Jyothi

IIT Bombay & Microsoft

Improving code-switched Automatic Speech Recognition²

to Speech (TTS) to improve performance in low-resource settings

Aug 2020 – Jun 2021

Developed a new Gujarati-English **speech recognition** model conditioning the transformer on language of the text **Improving Low Resource Code-switched ASR using Augmented Code-switched TTS**² **Dec 2019 – Jun 2020** Used E2E Automatic Speech Recognition models trained on Hindi and English monolingual data and code-switched Text

R&D Project - Prof. Amitabha Sanyal

IIT Bombay

Fall 2020

Implemented an automated debugger for GCC plugin designed to detect bugs in C program translation

PROGRAMMING LANGUAGES AND SOFTWARES

C/C++, python, bash, JavaScript, OCaml & Haskell, Java, SQL, PyTorch & TensorFlow, AVX, Git, Perforce, Linux, Docker, MATLAB, Dart

KEY PROJECTS

Modeling misinformation in organizations using ; Prof. Jon Kleinberg; Spring 2023Cornell UniversityFew-shot action recognition on egocentric data; Prof. Kilian Weinberger; Fall 2022Cornell UniversityLow Resource Morphological Inflection 2021; Evolutionary RL on maze solving 2020;IIT Bombay

¹Equal contribution

²Work done as part of collaboration between Microsoft India Development Center and Indian Institute of Technology Bombay