

## EDUCATION

<b>Cornell University</b>	<i>Ithaca, NY</i>	<b>Aug 2022 – May 2024</b>
<ul style="list-style-type: none"><li>• <b>Master of Science</b> in Computer Science GPA: 3.91 / 4.00, <b>Minor</b> in Cognitive Science</li><li>• <b>Graduate courses:</b> Computational Sustainability, Advanced Topics in ML, Advanced Programming Languages</li></ul>		
<b>Indian Institute of Technology Bombay</b>	<i>Mumbai, India</i>	<b>Aug 2017 – May 2021</b>
<ul style="list-style-type: none"><li>• <b>Bachelor of Technology</b> in Computer Science &amp; Engineering with <b>Honors</b>, <b>Minor</b> in Artificial Intelligence &amp; Data Science</li><li>• GPA: 9.68 / 10, Honors GPA: 10 / 10, Minor GPA: 9.4 / 10</li></ul>		

## WORK EXPERIENCE

<b>Research Engineer, Matic Robots</b>	<i>Mountain View, CA, USA</i>	<b>Jun 2024 – present</b>
<ul style="list-style-type: none"><li>• Part of the <b>Neural Networks</b> team building robust real-time <b>autonomous perception and understanding</b>.</li><li>• Building and evaluating deep learning systems using state-of-the-art models.</li></ul>		
<b>Software Engineer, Samsung Electronics</b>	<i>Suwon, South Korea</i>	<b>Sep 2021 – Aug 2022</b>
<ul style="list-style-type: none"><li>• Developed high-performance <b>5G-NR</b> virtual L1 layer as a member of <b>Physical Uplink Shared Channel</b> team.</li><li>• Utilized Intel®Intrinsics (<b>AVX-512</b>) for efficient parallel processing of data, focusing on cache bottleneck optimization.</li><li>• Reduced bottlenecks in uplink signal processing pipeline to achieve upto <b>20% speedup</b></li></ul>		
<b>Network Engineer Intern, Samsung Electronics</b>	<i>remote</i>	<b>Jun 2020 – July 2020</b>
<ul style="list-style-type: none"><li>• Built an automated network load testing framework to evaluate performance of in-production load balancing services</li></ul>		
<b>Summer Research Intern, TU Braunschweig</b>	<i>Braunschweig, Germany</i>	<b>May 2019 – July 2019</b>
<ul style="list-style-type: none"><li>• Designed and built <b>WeLineation</b>, a full-stack app using <b>Expectation Maximization</b> for medical image segmentation.</li></ul>		

## RESEARCH EXPERIENCE

<b>Master's Thesis - Prof. Sanjiban Choudhury</b>	<i>Cornell University</i>	<b>Feb 2023 – Apr 2024</b>
Building perception tools using <b>vision-language transformer models</b> to allow transfer of human skills to household robots. Building a <b>speech-interactive task planner</b> for human-robot collaborative cooking, along with a web-based evaluator.		
<b>Undergraduate Research - Prof. Preethi Jyothi</b>	<i>IIT Bombay &amp; Microsoft</i>	
<b>Improving code-switched Automatic Speech Recognition using Transformers<sup>1</sup></b>		<b>Aug 2020 – Jun 2021</b>
Built a new bilingual <b>speech recognition</b> model conditioned on language using CUDA accelerated dynamic programming		
<b>Improving Low Resource Code-switched ASR using Augmented Code-switched TTS<sup>1</sup></b>		<b>Dec 2019 – Jun 2020</b>
Used E2E Automatic Speech Recognition models trained on Hindi and English monolingual data and code-switched Text to Speech (TTS) to improve performance in low-resource settings		
<b>R&amp;D Project - Prof. Amitabha Sanyal</b>	<i>IIT Bombay</i>	<b>Fall 2020</b>
Implemented an automated debugger for GCC plugin designed to detect bugs in C program translation		

## TEACHING ASSISTANTSHIPS

<b>CS4780: Introduction to Machine Learning</b>	<i>Cornell University</i>	<b>Spring 2024</b>
<b>CS3410: Computer System Organization &amp; Programming</b>	<i>Cornell University</i>	<b>Fall 2023, Fall 2022</b>
<b>CS4820: Introduction to Analysis of Algorithms</b>	<i>Cornell University</i>	<b>Summer 2023</b>
<b>CS2770: Excursions in Computational Sustainability</b>	<i>Cornell University</i>	<b>Spring 2023</b>
<b>CS251: Software System Lab</b>	<i>IIT Bombay</i>	<b>Fall 2020, Fall 2019</b>
<b>MA105: Calculus</b>	<i>IIT Bombay</i>	<b>Fall 2018</b>
Won TA awards for <b>Fall 2020</b> and <b>Fall 2022</b>		

## PUBLICATIONS

- **Demo2Code: From Summarizing Demonstrations to Synthesizing Code via Extended Chain-of-Thought** [*NeuRIPS 2023*]
- **Improving low resource code-switched ASR using augmented code-switched TTS** [*INTERSPEECH 2020*]
- **WeLineation: crowdsourcing delineations for reliable ground truth estimation** [*SPIE Medical Imaging 2020*]

## PROGRAMMING LANGUAGES AND SOFTWARES

C/C++, python, bash, Rust, Haskell, Java, SQL, PyTorch & TensorFlow, AVX, Git, Perforce, Linux, Docker, MATLAB, Javascript & node

## KEY PROJECTS

<b>Psychological analysis of ChatGPT in risky decision making; Prof. Valerie Reyna; Fall 2023</b>	<i>Cornell University</i>
<b>Modeling misinformation in organizations using ; Prof. Jon Kleinberg; Spring 2023</b>	<i>Cornell University</i>
<b>Few-shot action recognition on egocentric data; Prof. Kilian Weinberger; Fall 2022</b>	<i>Cornell University</i>
<b>Morphological Inflection through Deep Learning 2021; Maze Solving with Evolutionary RL 2020</b>	<i>IIT Bombay</i>

<sup>1</sup>Work done as part of collaboration between **Microsoft India Development Center** and **Indian Institute of Technology Bombay**