



# Hardik SILOIYA

## First Year Computer Science Masters Student | Georgia Tech

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## EDUCATION

- 2023 – 2025 **Georgia Institute of Technology**  
M.S. in Computer Science (Specializing in Computing Systems)
- 2019 – 2023 **Indian Institute of Technology Bombay**  
B.Tech. (Honors) in Computer Science and Engineering

## INTERSHIPS

- May 2022 **Wells Fargo, BANGALORE, India**  
July 2022 **Software Engineering Intern**  
*Offered Pre-Placement Offer for exemplary performance throughout the internship*
- > Deployed a real time emotion detection chat-bot obtaining an accuracy of 95% using fine-tuning the BERT model
  - > Implemented a low-latency suggestion generator in the chat-bot using heuristic algorithms on queries and ML models to give real-time suggestions to executives from a dictionary
  - > Implemented a feedback loop allowing customers to rate messages, facilitating active learning of neural network
- May 2021 **MindWorks Global, NEW DELHI, India**  
July 2021
- > Implemented a Faster RCNN based object detection framework via Detectron2, and fine-tuned it for accurate detection of headline and body in images of news articles, obtaining a mAP of 90%
  - > Used the Tesseract Optical Character Recognition model to obtain the textual information from the the objects detected by Faster RCNN

## </> KEY PROJECTS

- Spring 2022 **Self-stabilizing algorithm for Grid architecture, R&D PROJECT, IIT Bombay**
- > Developed an algorithm for stabilizing a distributed system in the form of a grid network, achieving fault recovery from arbitrary state and converging in quadratic order using mutual exclusion
- Mutual Exclusion Concurrency Distributed Systems
- Spring 2022 **SCLP : Compiler for C-like language, COMPILERS LAB, IIT Bombay**
- > Developed a **compiler and interpreter** for subset of C supporting functions, scope levels and control sequences
  - > Used **Lex** for tokenizing, **Yacc** for parsing and **constructed ASTs** to **generate MIPS assembly code**
- Compilers Automata Theory Yacc Lex C
- Autumn 2020 **Online Development Environment (ODE) , SOFTWARE SYSTEMS LAB, IIT Bombay**
- > Developed an **online development platform** with an **isolated environment** supporting User Registration and Code saving APIs using a **code directory** storage system
  - > Implemented **compiler support** for **C++, python, and Java** including their library support
  - >  : [github.com/hardiksiloia/405-Found](https://github.com/hardiksiloia/405-Found)
- Software Development Online development File storage Django Python
- Spring 2022 **Covid Analyzer, DATABASE SYSTEMS LAB, IIT Bombay**
- > Developed a react application which allows users to **view and compare** various **covid statistics** from countries around the world by querying data from a **time series database** using **influxQL**
  - > Implemented **user groups** giving access to certain users to add data into the database and global data
  - >  : [github.com/hardiksiloia/Covid\\_analyzer](https://github.com/hardiksiloia/Covid_analyzer)
- Databases influx user groups data visualization

## KEY COURSES UNDERTAKEN

- Graduate Level**      Advanced Operating Systems, Applied Cryptography, Algorithms, Network Algorithmics
- Undergraduate Level**      Database Systems, Automata Theory, Compilers, Discrete Structures, Computer Architecture and Lab, Operating Systems, Artificial Intelligence & Machine Learning, Logic for Computer Science, Computer Networks

## EXTRA CURRICULAR

- > Secured **City Rank 4** in the **Talent Hunt Exam** conducted by Career-Launcher
- > Participated in the **International Children's Festival of Performing Arts** consisting of participants from over 45 countries.
- > Received a special mention in **Video-Making Competition** organised by Culturals, IIT Bombay
- > Hobbies : **Competitive Programming**, playing **guitar**, **E-Sports**, **football** and watching **anime**