

# Devyani Tushar Maladkar

University of Texas at Austin

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## Education

MS, Computer Science, University of Texas at Austin. <i>Graduate Research Assistant with Professor Aryan Mokhtari (WNCG). Working on projection-free algorithms for min max optimisation.</i>	4/4	2022 – 2024
BTech, Computer Science and Engineering (Gold Medalist, Institute Rank 1), Indian Institute of Technology Goa	9.95/10	2018 – 2022

## Skills

**Computer Skills** C++ (proficient), Python (proficient), R, Bash, HTML, Java Script, Java, Latex, MATLAB.

**Software Skills** PyTorch, Tensorflow, MATLAB, Gurboi, Jupyter, RStudio.

## Experience

### Dolby Laboratories

**Software Engineer Intern, Media API R&D, Dolby.io**

[May 2023 - August 2023]

- **Developed diagnosis tools for audio video real time streaming pipeline**, worked on the live performance streaming application, and **built tools to obtain and visualise network condition and performance metrics**.
- Developed industry level code in C++,C, Python and used Prometheus and Graphana to build diagnostic reports .

### MathWorks India Private Limited, Hyderabad.

**Intern, Engineering Development Group.**

[July 2021 - Nov 2021]

- **Developed C++ software component**, alongside the AUTOSAR and SLRT prototyping team, for **improving performance of existing Simulink Calibration Tool**.
- Developed industry level code in C++ and MATLAB and performed testing of component.

### Summer@EPFL, École Polytechnique Fédérale de Lausanne.

**Research Intern, Intelligent Global Health, Machine Learning and Optimisation Lab.**

[June 2021 – Sept 2021]

- **Developed modifications to existing Contrastive Learning algorithms** in Computer Vision. **Successfully adapted and evaluated performance for Lung Ultrasound Videos** to perform COVID-19 diagnosis.
- **Analysed and designed experiments** for using Lung Ultrasound Videos in contrastive learning settings for COVID diagnosis.
- Performed extensive study of self-supervised approaches and detailed literature review. **Developed code in Python, using VISSL library and PyTorch framework** for experiment design and analysis.
- **Presented work virtually at the Geneva Health Forum**. The theme of the conference was “COVID-19 Pandemic and Environmental Emergency: Reinventing Global Health in a Time of Global Change”.

### Indian Academy of Science Fellowship: Indian Institute of Technology Bombay.

**Research Intern under the guidance of Prof. J Adinarayana.**

[Aug 2020 - Sept 2020]

- **Contributed** to developing a visualisation tool for geo-spatial analysis, by **collaborating with the interdisciplinary team** at the Aggroinformativs lab at IIT Bombay.
- **Designed and built visualisation platform** [\[Link\]](#) for drone-sensing outputs using OpenLayers javascript Library and performed data analysis using Python. The platform was developed to be user friendly for scientists and interactive for more flexibility in visualisation and analysis of the agriculture data. Various visualisation libraries in Python and JavaScript were tested.

## Projects

### Controlled Text Generation for Large Language Models [\[Code\]](#)

[Feb 2023 – April 2023]

- Worked on implementing modules for controlled text generation on output of large language models, for restaurant reviews.
- Reproduced and Extended existing controlled text generation results for multi-control settings.

### Graph Neural Network Disagreement Problem [\[Code\]](#)

[Sept 2022 – Nov 2022]

- Worked on studying the disagreement problem for graph neural networks. Developed metrics and performed extensive analysis on different GNN architectures.

### Application of Network Flow Algorithms to Transport System

[May 2020]

- Worked in a team of 2 for developing application of network flow algorithms in the Bus Transportation system for Shahapur Taluka.
- Data processing of Bus routes and algorithm application was done using Python libraries - numpy, pandas, NetworkX. The objective was to provide an occupancy analysis for the current bus infrastructure,using Network Flow algorithms .

## Achievements

- **Awarded the Grace Hopper Scholarship 2023.**
- **Awarded the President of India Gold Medal for being the Most Outstanding Student of Bachelor of Technology (2022).**
- **Presented Poster (Virtually) at the Geneva Health Forum 2021.**
- **Awarded for Technical and Academic Excellence 2018-2019 by Prof. B.K. Mishra, Director of IIT Goa.**

