# Devansh Rastogi



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#### EDUCATION

#### Indian Institute of Technology Madras

Bachelor of Science in Data Science and Applications, CGPA - 8.25 (Upto 1st Semester)

#### Guru Gobind Singh Indraprastha University

Bachelor of Technology in Computer Science, Minor in AI & ML, CGPA - 8.88 (Upto 7th Semester)

Chennai, Tamil Nadu Jan. 2024 - Dec. 2027 Dwarka, Delhi

Sep. 2021 - July 2025

#### EXPERIENCE

Research Intern May 2024 - Present

IIIT-Delhi

On-site, Networked Systems Lab

- Collaborated on a project associated with Marvell Technologies USA and IIT Hyderabad
  - The ongoing project aims to simulate RDMA network traffic for distributed AI model training and inferencing
  - · Acquired extensive knowledge about operating systems, AI models, LLMs, deep learning, and distributed computing
  - Conducted in-depth research on RDMA technology, specifically the RoCEv2 implementation

Data Science Intern Feb. 2024 - Mar. 2024

IBM SkillsBuild — CSRBOX

Remote

On-site, Gurugram - Haryana

- Acquired sound technical knowledge of data cleaning and preparation, statistical analysis, and data visualization
- Tested this knowledge on the analysis of a real-world project through a case-study
- Learned to interpret the results of the analysis and presented them effectively

Liaison Officer July 2023

G20 Conference on Crime and Security in the age of NFTs, AI & Metaverse

- Facilitated collaboration among G20 nations' representatives • Ensured seamless communication on emerging NFT, AI, and Metaverse challenges
- Fostered collective strategies for global crime and security

## Projects

RDMA Network Traffic Analysis for Distributed LLM Inferencing | PyTorch, torchrun, Llama June - Dec. 2024

- Collaborated with a team to understand RDMA network packet traces for a distributed LLM inferencing workload
- Utilized Nvidia H100 GPUs on IIITD rack servers for LLM inferencing
- Set up a physical RDMA (RoCEv2) communication infrastructure for efficient GPU-GPU communication using Intel RNIC
- Generated RDMA traffic for distributed Llama-2 inferencing workload using PyTorch library's torchrun functionality

## Hotel Reservation System | Ballerina, Choreo, React.js

Feb. 2024

- Implemented an API service using the Ballerina programming language to demonstrate a simple hotel reservation use case
- Developed front-end using React.js and built this project as a part of a buildathon conducted at my college
- Acquired sound technical knowledge about Ballerina and Choreo concepts
- Deployed the fully working Ballerina application on Azure cloud using Choreo

Classify Song Genres from Audio Data | Python, Pandas, Seaborn, Scikit-learn

Jan. 2024 - Feb. 2024

- Trained a classifier to distinguish between Hip-Hop and Rock genres based only on track information derived from Echonest
- Prepared the dataset using Pandas and Seaborn packages to apply principal component analysis (PCA)
- Used the Scikit-learn package to predict whether we can correctly classify a song's genre based on features such as danceability, energy, acousticness and tempo; Used cross-validation to evaluate the models

# $younixShop \mid C++, Object-Oriented Programming$

Dec. 2022 - Jan. 2023

- Simulated a typical inventory management software using only C++ code
- Primarily used C++ file handling operations to carry out all types of transactions
- Provided functionalities such as administrative management, customer account management, bill management, sales-report generation and even a dedicated customer help centre page
- Strictly followed an object-oriented design and ensured sensitive data security through the usage of binary files

### TECHNICAL SKILLS

Languages: Python, C, C++, Swift, SQL

Data Science: PyTorch, TensorFlow, Pandas, NumPy, Scikit-learn, Matplotlib Developer Tools: Git/GitHub, VS Code, Xcode, JupyterLab, RStudio

Hardware Skills: Arduino, Raspberry-Pi, Circuit Design, Sensor Integration, GPIO Programming

# Extra-Curricular Activities

YouTube: Passionate YouTube content creator with over 100 subscribers, featuring both technical and varied content Volunteering: Engaged in regular community service involving the preparation and distribution of meals to individuals in need