PRADYUN DEVARAKONDA

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EDUCATION

iMTech, Computer Science and Engineering
International Institute of Information Technology, Bangalore

📅 October 2022 – July 2027   📍 Bengaluru, India

- Integrated Bachelor's + Master's Degree
- CGPA: **3.67/4.0** (as of 5 semesters)

EXPERIENCE

Summer Research Project Intern
iiitb

📅 June - August 2024   📍 Bengaluru, India

- I worked under Prof. Pradeesha Ashok in a team of four.
- This internship gave me exposure to theoretical research in algorithms and graph theory.
- We worked on an NP-complete graph problem called the Coupon Coloring Problem and produced **4+** results accepted to CALDAM 2025.

PROJECTS

ColStore
Data Modeling, SQL, C++, ExpressJS, OO-Design, Data Warehousing

📍 February 2025 – Ongoing

- Developing a Columnar Storage system(DB+DBMS) ideal for Data Warehousing/OLAP applications in a team of three.
- Building a robust DBMS with DDL, DML, and DQL Engines and advanced features like indexing, OLAP operations, and bitmap indexing(specific to a columnar DB)

LinguaLeap
ReactJS, NodeJS, ExpressJS, MongoDB, Docker, Redis, nginx, GenAI APIs

📅 November 2024 – Ongoing

⬡ https://github.com/Praninara/LinguaLeap.git
Deployed at: **https://praninara.github.io/LinguaLeap**
- Developing a gamified language learning platform with interactive games and visually appealing retro-gaming UI with the MERN stack in a team of three. As of March 2025 LinguaLeap includes **3** games that support **2** languages.
- Implementing support for multiplayer modes with minimal latency and efficient load-balancing using distributed systems with tools like Redis, nginx, socket.io, Grafana, and Prometheus. The load balanced (**3** Servers) application can work with **3000** users at **1500 RPS** and **150ms** latency.
- Dockerized the application for better development, deployment, and scalability.

Twitchalytics++
Visual Analytics, Data Analytics, Machine Learning

📅 November – December 2024

⬡ https://github.com/pradyunuydarp/Twitchalytics-plus-plus.git
- Comprehensively analyzed and linked datasets containing Twitch streamer and game data from August 2019 to August 2020 in a team of three.
- Created visualizations, machine learning models, and made inferences following the Visual Analytics Framework proposed by *Keim et al. (2008)*.
- Produced a visual analytics workflow with over three feedback loops and three stages in the pipeline.

SKILLS

Programming

C++   Java   Python   C   MySQL
HTML   CSS   JavaScript
Object Oriented Programming

Technical

Data Structures   Algorithms
Software Engineering   Database Systems
Operating Systems   Software Development
Machine Learning

Technolgies & Frameworks

LaTeX   Linux

PUBLICATIONS

Parameterized Complexity of Coupon Coloring of Graphs
Algorithms and Graph Theory

📅 October – November 2024

- The paper was accepted to CALDAM 2025(11th Annual International Conference on Algorithms and Discrete Applied Mathematics).
- The Coupon Coloring problem in graphs is an NP-Complete problem that finds applications in several fields like network science and coding theory.

MENTORSHIP

Linear Algebra Teaching Assistant
iiitb

📅 January 2025 – Ongoing

ACHIEVEMENTS

Dean's Merit List

📅 July – September 2024

- Students with a CGPA of **3.6** or higher are listed in the Dean's Merit List. I was named in the Dean's Merit List for the year 2023.

COURSEWORK

Reinforcement Learning   Data Modeling
Multi-Objective Machine Learning   Docker
ExpressJS   React   Redis

EXTRA-CURRICULAR SKILLS

Garageband   Audio Editing
Poetry & Writing