

Cebajel Tanan

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🔗 Cebajel Tanan

Education

Indian Institute of Technology Dharwad

Nov 2021 – May 2025

Bachelor of Technology in Computer Science and Engineering

CGPA: 9.75/10

Coursework: Data Structures and Algorithm, Computer Architecture, Artificial Intelligence, Linear Algebra, Discrete Structure, Mathematics for Data Science, Computer Networks, Design and Analysis of Algorithms, Operating Systems

Experience

Antimicrobial Resistance Prediction, Data Science Intern

Jan 2023 – July 2025

- Analyzed **over 10** machine learning models using **more than 3** dimensionality reduction techniques on Raman spectroscopy data of 3 bacterial strains, resulting in **3 publications**.
- Developed an application which classifies bacterial resistance against Colistin with **97% accuracy** using Raman spectroscopy data.

IP Analyzer, Cybersecurity Intern

May 2023 – Present

- Developed and deployed a web application to recognize malicious IP addresses/domains using multiple sources, resulting in **2 publications**.
- Designed application queries and processed **150+** grey list databases using a custom metric to evaluate host reputation, ensuring the latest and reliable information.
- Integrated and processed information from **9 sources** and displayed it in user-friendly UI which received grants from **Nvidia** and **BPR&D** (Bureau of Police Research and Development).

Texas Instruments, Software Development Intern

Jan 2025 – June 2025

- Enhanced a tool for designing silicon chips by integrating new features using Angular and Django and optimizing its performance, which led to receiving a **silver recognition award**.
- Developed a lab inventory management system to handle inventories of more than **13** types of labs across the world.
- Fixed and deployed a tool responsible for testing silicon chips awarding me **gold recognition award**.

Texas Instruments, Software Development Intern

May 2024 – July 2024

- Designed a program which fetched and compiled information from multiple different kinds of sources and generated a report helping teams to analyze pending issues act upon it leading to **2x** faster workflow.
- Optimized existing scripts used for analyzing issues in the development of projects at Texas Instruments from an average runtime of **8-10 hours** to **22-30 minutes**.
- Received a **Pre-Placement Offer** (PPO) based on outstanding performance and contributions.

Automated Timetable Scheduler, Research Intern

Jan 2023 – Sept 2023

- Developed a framework that creates timetables for institutes by considering general constraints for students, professors, campus, and venue capacity, improving scheduling efficiency.
- Handled **16** different constraints on **100+ courses** and **6000+ registrations**, ensuring smooth scheduling and efficient resource allocation.

Skills

Languages: Python, C++, JavaScript, Typescript, C, Java, SQL, PHP


Technologies: MongoDB, Neo4J, Redis, Postgre SQL, My SQL, Oracle SQL, Django, Angular, React, SpringBoot, MyBatis, Nginx, JIRA, Confluence, Klocwork, Orange3, Gurobi, Docker, Linux, Git

Topics: Convolution Neural Networks, Recommender Systems, Deep Neural Networks, Machine Learning, Generative Adversarial Networks, Time Series Analysis, Constraint Satisfaction Problems, Multi-Objective Optimization


Publications

Dimple Saikia, Ritam Dadhara, **Cebajel Tanan**, Prajwal Avati, Tushar Verma, Rishikesh Pandey, and Surya P. Singh. "**Combating Antimicrobial Resistance: Spectroscopy Meets Machine Learning.**", Photonics 2025, 12(7), 672.

[10.3390/photonics12070672](https://doi.org/10.3390/photonics12070672) 

Cebajel Tanan, Sameer Kulkarni, Tamal Das and Manjesh Hanawal, "**A Tool for Comprehensive IP Address Analysis,**" International Conference on COMMunication Systems & NETworkS 2025 Demo Track. Jan 2025
[Demo](#) 

Cebajel Tanan, Sameer Kulkarni, Tamal Das and Manjesh Hanawal, "**A Multi-Functional Web Tool for Comprehensive Threat Detection Through IP Address Analysis,**" IEEE Conference on Engineering Informatics (ICEI), Dharwad, India. Nov 2024

[10.1109/ICEI64305.2024.10912188](https://doi.org/10.1109/ICEI64305.2024.10912188) 


Dimple Saikia, **Cebajel Tanan**, G. Dhananjaya, Basavraj Hungund, Nilkamal Mahanta, and Surya P. Singh. "**Validating phosphoethanolamine modification as a potential spectral marker of colistin resistance.**" Analyst (2024). Nov 2024

[10.1039/D4AN01228C](https://doi.org/10.1039/D4AN01228C) 

Dimple Saikia, Arunsree Vijay, **Cebajel Tanan**, Surya P. Singh. "**Validating the utility of heavy water (Deuterium Oxide) as a potential Raman spectroscopic probe for identification of antibiotic resistance.**" Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 321 (2024): 124723. Nov 2024

[10.1016/j.saa.2024.124723](https://doi.org/10.1016/j.saa.2024.124723) 


Certificates



Machine Learning Specialization  – Completed 8 different courses Nov 2022 – Dec 2022

Google Cybersecurity  – Cybersecurity Course by Google May 2023 – July 2023

Google Cybersecurity Badge  – Badge awarded for completing Google Cybersecurity Course May 2023 – July 2023

CERTIn Certificate  – 12th Inter-IIT Tech Meet hosted by IIT Madras Dec 2023

ICEI Certificate  – Awarded for presenting paper and poster at IEEE Conference on Engineering Informatics (ICEI), Dharwad Nov 2024

Indo-Finnish Joint Course Certificate  – Awarded for delivering a lecture on significance of Game Theory in sustainable development at [Indo-Finnish Joint Course 2024](#)  Nov 2024

Awards & Achievements

Received **TI Global Gold and Silver Recognition Awards** owing to my outstanding performance and contributions during Texas Instruments Internship. June 2025


Achieved **GPA 10** on a scale of 10 in **two consecutive semesters** in bachelors. Aug 2022 - April 2023

Performed in **top 1%** Class XII Gujarat State Board examination. April 2020

Awarded Scholarship for Higher Education (SHE) under Innovation in Science Pursuit for Inspired Research (INSPIRE) scheme

Secured **3rd place** in lawn tennis at the **Khel Maha Kumbh** Gujarat. Oct 2017

Extracurricular

Delivered a lecture on significance of game theory on sustainable development at [Indo-Finnish Joint Course](#)  held at IIT Dharwad. Sept 2024

Represented IIT Dharwad at **12th Inter-IIT Tech Meet** hosted by IIT Madras. Dec 2023

Participated in Inter Hostel General Championship 2022 in **lawn tennis**. Dec 2023