Ritika Chakradhar

Computer Science and Engineering
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National Institute Of Technology, Bhopal

EDUCATION

INSTITUTION	COURSE	GRADE
St. Joseph's Convent School	X (CBSE)	10/10
St. Joseph's Convent School	XII (CBSE)	93%
MANIT	Computer Science and Technology (Pre-final year)	7.98

INTERESTS

Data Structures and Algorithms, Operating Systems, Database Management, Machine Learning
Languages : C/C++ (Advanced)

INTERNSHIPS AND PROJECTS

MACHINE LEARNING	**Cardiac Dysrhythmia Detection with GPU-Accelerated Neural Networks** ● In this work, we evaluate the performance of neural networks on classifying electrocardiogram (ECG) sequences as normal or abnormal (arrhythmia). ● Using neural networks as our primary learning model, we explain our model's performance. Comparing the results of our model to SVMs, random forests, and logistic regression, we find that our neural network outperforms the other three models with a binary classification accuracy of 98.9%. ● The use of GPUs accelerates the neural network training process up to an order of magnitude over CPUs.
DBMS AND SOFTWARE DEV.	● Created a database for over 220 students using **MySQL** ● Created various features for the Admin and the Teacher to **update, delete, edit** the attendance as well as **calculate percentage attendance** for each student
AZAD-1 NANOSATELLITE PROJECT	**Attitude Determination and Control Subsystem** ● **Determined sensors and actuators** that can be used on the nanosatellite with a payload to observe the Corona Effect ● Competitively **selected in a team of 5 members from 4,000** for ADCS System ● Analysed and compared various kinds of magnetometers and determined that HMC5883L would be best suited for Azad-1 and **constructed a flight board** to test the interfacing of sensors with single board computers
GPS BASED TRACKING ALGORITHM	● Organized a detailed survey on current GPS tracking and Estimated Time of Arrival methods used in different cities of India and analyzed their algorithms of tracking and simulation of data and **developed an algorithm** which ensures a more precise and accurate analysis of estimated time of arrival and tracking of public transport, **reducing the analysis time and increasing the efficiency** ● Appreciated for algorithm at technical fest of IIT Chennai

POSITIONS OF RESPONSIBILITY

Founder & Secretary	**SECRETARY, The Debating Society, founded in 2015** ● Lead and teach a team of 20 students for Asian Parliamentary Debates ● Winner of 2 national debates
Founder	**FOUNDER, Vyom**- A student initiative to teach underprivileged students english and mathematics for their wholesome development
Events Coordinator Technosearch 2015	**COORDINATOR, Technosearch** ● Led the planning and management of events for 3000 students ● Organized **Kodachrome** - the bi-annual photography exhibition, witnessing footfall of 2000 students-highest ever
Quizmaster	**QUIZMASTER, Quizzers' Club MANIT-**Organised over 10 quizzes in a year for 4000 students collectively

EXTRA CURRICULARS	
Initiatives	● **Founder : The Debating Society and Vyom** ● Volunteer for **Rubaroo**- a social interaction program with the orphaned and uneducated children involving over 500 students
Literary	● Chief Editor at 'Quizzotica' : annual magazine of QCM ● Coordinator at Drishtant- organise various workshops and events to enhance literary skills
Accolades	● **Winner-Megatreopuz** : Logic cryptic hunt organized all over India ● Reached top 16 in Cyborg Breakin' held at Tech-fest of IIT Roorkee ● **Winner** of Annual Debating Competition- NLIU-Bhopal ● 2nd position in National Quiz organized by AIIMS Bhopal ● Semi finalist in parliamentary debate- FTD, KMC Delhi ● First position in Bhopal District in MBD Talent Search