SYAMANTAK NASKAR

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EDUCATION

- B.Tech in Computer Science and Engineering at IIT Bombay with GPA 6.27 from 2012-2016
- Secured 91.2% in Intermediate/+2 in CBSE Board in 2012
- Secured 95.8% in Matriculation in ICSE Board in 2010

SCHOLASTIC ACHIEVEMENTS

- Secured All India Rank 2654 out of over half a million candidates in the IIT-JEE 2012
- Secured All India Rank 3764 out of over 1.3 million candidates in the AIEEE 2012
- Awarded scholarship for All India Talent Search Examination by International Children Equity Fund in 2007

INTERNSHIPS

Quad Hashing   Summer 2015
Edelweiss Financial Services Limited   *Ajit Borate*

- Programming Language Used : C++
- Implemented a Quad Hash and measured time in nanoseconds
- It performed better than Google Dense Map and Unordered Map in the STL Library

PROJECTS

Sales Prediction in E-Commerce Sites   Spring 2015
Machine Learning   *Prof. Ganesh Ramakrishnan, IIT Bombay*

- Programming Language Used : Python, GNUPlot
- Predicted the amount of sales of a product on given day and in given time interval using the previous sales data for that particular product
- Used Support Vector Regression (SVR) to model and train our data and analyse at various data points
- Plotted graphs to identify the trends in consumer behaviour so that we can manage the stock accordingly

Auto Parking Bot   Spring 2015
Embedded Systems Lab   *Prof. Kavi Arya, IIT Bombay*

- Programming Language Used : C++, Python
- Made a car parking bot using TIVA Board which would recognise the type of vehicle and assign a parking slot to it if available
- Used image processing to detect the type of vehicle and assign that particular type of spot to it
- Kept track of time the vehicle is parked and charge the owner accordingly

Virtual Memory Implementation   Spring 2015
Operating Systems   *Prof. D. M. Dhamdhere, IIT Bombay*

· Programming Language Used : C++
· Added virtual memory manager to GeekOS, an experimental OS built on top of Linux
· Implemented modules for handling processes, memory allocation, swap space management, page replacement strategy (one handed clock)

Compiler   Spring 2014
Compilers   *Prof. Amitabha Sanyal, IIT Bombay*

· Programming Language Used : BisonC++, FlexC++ , C++
· Took syntactically correct C++ program and converted it into optimal machine code using the least number of registers
· Used Sethi-Ullman Algorithm to generate code for expression trees

Performance Analysis Of B+ Tree   Autumn 2014
Database and Information Systems   *Prof. N. L. Sarda, IIT Bombay*

· Programming Language Used : C
· Used Bulk Loading to load the entries in the B+ tree
· Analysed the advantages of Concurrency control, fewer I/O to build and control fill factor in pages

Railway Timetable   Autumn 2014
Database and Information Systems   *Prof. N. L. Sarda, IIT Bombay*

· Programming Language Used : Java, PgSQL
· Made a ER Diagram and Efficient DB design
· Built a user friendly website to book tickets and cancel tickets
· Simulated tracking of trains and ticket reservation system

Web.DO   Summer 2014
Windows Store App   *Microsoft Mentors*

· Programming Language Used : Javascript(JS)
· Created a Windows App which was a WYSIWYG website builder

Machine Simulation using Box2D   Spring 2013
Software Systems   *Prof. Parag Chaudhuri, IIT Bombay*

· Programming Language Used : Box2D, C++, GNUPlot
· Simulated working of a piston using 2D physics engine Box2D with keyboard controls
· Optimized the code by profiling and identifying the time consuming parts

Surveillance Bot   Summer 2013
Institute Summer Technical Project   *ITSP Mentors*

· Programming Language Used : C++
· Implemented Image Processing using OpenCV in Codeblocks IDE
· Captures Captures images and records video in case of motion

Backgammon Game   Spring 2013
Abstraction and Paradigms for Programming   *Prof, Amitabha Sanyal, IIT Bombay*

· Programming Language Used : Scheme(Lisp)
· Used the graphics and GUI libraries
· Implemented Artificial Intelligence (AI) using minimax algorithm

Copter   Autumn 2012
Computer Programming and Utilization   *Prof. Abhiram Ranade, IIT Bombay*

· Programming Language Used : C++
· Created a single player game in C++ with GUI in which you have to traverse through obstacles
· Implemented GUI using EzWindows

POSITION OF RESPONSIBILITY

Convenor   April 2013-14
Web and Coding Club   *Students' Technical Activites Body, IIT Bombay*

· Organising all web and coding events in IIT Bombay
· Actively working in creation of Web and Coding Club website

Organisor   April 2012-13
Publicity Department   *Techfest 2013, IIT Bombay*

· Coordinating with the colleges across the country for organising events
· Organising and dealing with sponsors for the successful festival

TECHNICAL SKILLS

· Skilled in C++ and object oriented concepts
· Skilled in Scheme (Lisp) and concepts of Functional Programming
· Familiar with OpenCV, MIPS, HTML, CSS, Scilab, Prolog, Python, C, Bash and Java
· Platforms : Linux, Windows and Android

MISCELLANEOUS

· Built a wireless remote controlled bot for XLR8, a technical event in IITB
· Have avid interest in competitive programming
· Awarded the 3rd Kyu (Brown Belt) in Karate by Shito Ryu Karate-Do Federation
· Worked under Green Campus as a part of NSS team planting trees in the Institute