Pranjal Tale

Sophomore at Indian Institute of Technology, Roorkee

I have a keen interest in Mathematics and Programming. My areas of interests in Mathematics include Number Theory, Cryptography, Numerical Methods and Algorithms

EDUCATION

IIT Roorkee,Roorkee — July 2015 - Present

Int. Msc in Applied Mathematics (C.G.P.A. – 7.500)

Jawaharlal Nehru School, Bhopal— April 2015

Higher Secondary(CBSE) – PCM + Computer Science(Percentage – 91%)

Jawaharlal Nehru School, Bhopal— April 2013

Senior Secondary (CBSE) – (C.G.P.A – 9.6)

ACADEMIC PROJECTS

A 3D analysis of Oxygen transfer for animal cell suspension culture

A 3D model was developed to study the flow field and oxygen transport in a micro bioreactor with rotating magnetic field at the bottom.
Here we are trying to solve the equations and verify the results numerically using Marker and Cell over finite difference method under Dr. Ameya Kumar Nayak(Associate Professor IIT Roorkee,India).

Mathematical Analysis Report Submissions

Made Several detailed report Submissions on mathematical topics like Operation Research, Fractals, Hilbert Space, ring theory, Cryptography (Public and private key encryptions), theta functions, Roots of polynomial, coding theory, Asymptote Curve Tracing, Abstract algebra, Functional Analysis, partitions. Under Prof. Dr. R.C. Mittal(Department of Mathematics IIT Roorkee).

Lab Experiences

Implemented Several Algorithms in Data Structures, also incorporated advanced topics such as Segment Tree, AVL Tree, Dynamic Tree, Priority Queue, etc.
Conducted various experiments on electromagnetism, diffraction like frank hertz experiment, single slit diffraction, Helmholtz experiment etc. Along with this conducted experiments of Fluid Mechanics in Hydro Engineering Laboratory.

RELEVANT COURSES

- Data Structures
- Discrete Mathematics
- Number Theory
- Design And Analysis of Algorithm
- Numerical Methods
- Linear Algebra
- Graph Theory
- Real Analysis
- Complex Analysis
- Fluid Mechanics

TECHNICAL PROJECTS

IMG Website

I am currently working on IMG(Information Management Group) Website as a full stack developer Hosting its backend on django, frontend on materializecss and jquery. Also the same has several features like admin panel, individual's profile, blogs etc.
Also i am regularly contributing to Sympy(Symbolic mathematical manipulation library written in python).

POSITION OF RESPONSIBILITY

Information Management Group, Roorkee—Hub Coordinator

January 2016 - PRESENT

IMG (Information Management Group) is a student's group in IIT Roorkee responsible for development and maintenance of internet and intranet applications in the institute, including the website of IIT Roorkee.

Students Affair Council — *Member*

July 2015 - April 2016

I have been the part of Alumni Relations Team of SAC (Students Affair Council) IIT Roorkee for the academic Year 2015-2016. Along with that we also help in planning and execution of Global Entrepreneur's Conclave for the First time in IIT Roorkee.

Program Management Section — *Member*

Aug 2015 - Present

Was selected by the Program management Section IIT Roorkee as a program manager. Program management section is a club under Cultural Council IITR and is responsible for the conduction and management of all the events of Cultural Council smoothly.

CONTACT

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