

Divyat Mahajan

3rd Year Undergraduate Student
Department of Mathematics, IIT Kanpur

Email: divyatm@iitk.ac.in, divyatmahajan@gmail.com
Contact: +91 7755057756

EDUCATION

Year	Degree	Institution	CPI/ %
2014-2019	B.S. in Mathematics And Scientific Computing B.Tech. in Computer Science And Engineering (Double Major)	Indian Institute of Technology Kanpur	8.9/10.0
2014	XII Standard	St. Stephens Sn. Sec. School, Chamba, HP	89.8 %
2012	X Standard	St. Stephens Sn. Sec. School, Chamba, HP	94.7 %

RESEARCH EXPERIENCE

Stance Classification of Tweets in Online Debates

June 2016-July 2016

Project under Associate Professor Vincent Ng, University of Texas at Dallas

Program: Research Track Exploration IIT Kanpur

- Worked on predicting stance for tweets against a target using machine learning algorithms, a task in International Workshop on Semantic Evaluation 2016
- Read research papers on sentiment analysis and stance classification and used ideas from them to develop better solutions for tweets that do not express opinion about the main target
- My approach included classifying tweets first on basis of their object of opinion or secondary target and then finding stance for particular secondary target and relating it to stance for the main target
- Generated feature vectors using bag of words approach and used Pointwise Mutual Information to extract useful features
- Used support vector machines for classification of tweets and implemented it all using python

Data Fitting Analysis

May 2016-Present

Project under Associate Professor Sharmishtha Mitra, IIT Kanpur

- Worked on fitting data obtained from Generalised Exponential distribution to Weibull distribution
- Generated random data from Generalized Exponential distribution using Inverse Probability Integral Transform
- Read research papers about finding Maximum Likelihood Estimator for Weibull distribution and implemented it using Matlab to fit the generated data
- Currently, implementing Chi Squared, Mean Square Error, and Coverage Probability tests to determine the quality of fit

Human emotion recognition from images

September 2016-Present

Course Project under Assistant Professor Piyush Rai, IIT Kanpur

- It is the course project for Machine Learning Techniques where I will work on recognizing human emotions from images
- Plan is to review and implement research papers in this field majorly covering methods like Support Vector Machines and Neural Networks

IMPLEMENTATION BASED PROJECTS

Academics App

May 2015-June 2015

Mentor: Programming Club, IIT Kanpur

- Built an android app which gives academic data like timetable, exam schedule and course details for IIT Kanpur students
- Scraped academic data from website using python libraries and used JSON parsing to get data to app
- Added features like saving data for offline view, notifications on exam schedule, timetable and course search with multiple search queries

Backend Web Development

August 2015-March 2016

Role: Senior Executive Web, Techkriti 2016

- Contributed to backend part of website of Techkriti 2016, the annual technical festival of IIT Kanpur
- Assisted in coding for registration, login check, discussion forum, mailing portal and managing database with the team
- Implemented all the stuff using CodeIgniter and PHP and used PhpMyAdmin to manage database

AWARDS AND ACHEIVEMENTS

- Obtained **second position** in International High Performance Computing organized by **CDAC India** and Techkriti IIT Kanpur
- Secured All India Rank 1940 in JEE-Advanced 2014 out of 150,000 students with Percentile 98.71
- Successfully built an app in CODE.FUN.DO hackathon organized by Microsoft at IIT Kanpur
- Listed among top teams in Chaos, Techkriti IIT Kanpur which involved writing code in a new language given at start of contest
- Secured Rank 1 in state mathematics Olympiad organized by Children Science Congress in Himachal Pradesh

TECHNICAL SKILLS

Programing Languages	C, C++, Python, Bash, Octave
Software and Utilities	Git, Vim, Latex, Android Studio
Web Development	HTML, CSS, PHP, CodeIgniter, SQL, Web Scrapping(Python)

RELEVANT COURSES

Computer Science

- Introduction to Computing, Data Structures and Algorithms, Machine Learning Techniques*(Ongoing)

Mathematics

- Linear Algebra, Abstract Algebra, Mathematical Logic, Ordinary Differential Equations
- Real Analysis, Complex Analysis*(Ongoing), Severable Variable Calculus and Differential Geometry*(Ongoing)

Statistics

- Introduction to Probability and Statistics, Applied Stochastic Processes*(Ongoing)

Other Relevant

- Introduction to MicroEconomics, Introduction to Electronics

Online Courses

- Introduction To Computer Science And Programming With Python (MITx-6.00.1.x)(edX)
- Introduction To C++(Microsoft DEV210x) (edX)

POSITION OF RESONSIBILITY

Senior Executive Newsletter, Stamatics IIT Kanpur

September 2016- Present

- Stamatics is the Mathematics society of IIT Kanpur that works for organizing various mathematical events
- Working on publishing monthly newsletter on mathematics and various fields related to it for the campus community

Technical Head, Raktarpan, IIT Kanpur

August 2016- Present

- Managing website and other technical projects of Raktarpan, a social welfare unit of IIT Kanpur solving problems of blood shortage

Secretary, Stamatics IIT Kanpur

August 2015-March 2016

- Helped coordinators to organize various events like mathematics competitions, talks and departmental freshers

SOCIAL SERVICE AND VOLUNTEERING EXPERIENCE

National Service Scheme

July 2014- March 2015

- Worked in National Service Scheme at IIT Kanpur under Professor H.C. Verma to provide better education to poor children
- Taught mathematics to 8th standard underprivileged students and demonstrated some fun science experiments

Blood Connect

Feburary 2016-Present

- Volunteer in Kanpur team of Blood Connect, largest NonGovernmental Organisation working to provide solution to problem of shortage of blood in India
- Helped in organizing blood donation camps with other team members and worked on handling technical aspects