

Palash Mittal

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Education

- 2012-2016 **B.Tech in Computer Science**, *Indian Institute of Technology Kharagpur*, Kharagpur, *CGPA - 8.25*.
2011-2012 **Senior Secondary - AISSCE**, *Aklank Public School*, Kota, Rajasthan, *91.2%*.

Achievements

- 2014 - 2015 Won Xerox Research Innovation Challenge at Xerox RCI Open 2015
2013 - 2014 Top 5 team in Microsoft's Code.Fun.Do and qualified for the Finalists Forum
Top 3 in Mozilla's Boot Camp for designing app for Firefox OS
2012 All India Rank 429 in Joint Entrance Examination by IIT, 5 lakh candidates appeared.
2011 - 2012 National top 1% in National Standard Examination in Physics, 43000 candidates appeared
National top 1% in National Standard Examination in Astronomy, 11600 candidates appeared
2011 Cleared Regional Mathematics Olympiad
2010 All India Rank 15 in International Mathematics Olympiad by SOF
Cleared National Standard Examination in Junior Science
2009 6th position in Dainik Bhaskar Talent Search Exam

Internship

- 2015 **Summer Analyst**, Goldman Sachs.

Technical Skills

- OS GNU/Linux
Extensive C/C++, Java
Intermediate Python, Perl, Shell Scripting (Bash), MySQL, HTML, CSS, JavaScript
Basic Version Control(git), Bash, OpenCV

Projects

- 2015 **Steganography and Steganalysis**, Guide: Prof. Rajat Subhra Chakraborty.
Improvising the complexity of the existing algorithms for steganography and steganalysis and trying to devise new methods for the same.
- Temporal Evolution and content mutation of hashtags**, Guide: Prof. Animesh Mukherjee and Prof. Pawan Goyal.
Study temporal content variation of hashtags as well as motivation of users behind such type of participation.
- Ambulance Response Time Optimization**, Xerox Research Centre India Open 2015.
Using the Facility Location problem as a model , we were able to assign Ambulance locations in a city based on the accident count in each area such that the response time of an ambulance in case of an emergency is minimized. The p-Median version of the Facility location problem was solved using the Tabu search meta-heuristic.

Information Retrieval Project, *Camera Search Engine*, Guide: Sudeshna Sarkar.

Crawled Flipkart's website to extract features for the cameras, and used solr for indexing and performed sentiment analysis on the reviews.

2014 **GoSecure**, Microsoft's Code.Fun.Do Finalists Forum.

Used Python scrapers and GibbsLDA for topic identification from the news corpus(NLP) to get the crime index of various routes in the city of Delhi, using which the app shows the safest and the most optimal path between two destinations.

Sign Language Interpreter, Guide: Prof. Priyadarshi Patnaik.

Used k-means clustering algorithm and OpenCV modules to extract feature vectors of hand gestures and to train and classify the model. Can be used as tutorial software for learning.

Graphics Editing Software, Guide: Prof. Parta Pratim Das.

Made a graphics editing software using Java's Graphics Library. The software allowed users to create basic shapes and manipulate and modify their properties.

2013 **Shopping App using Kinect**, Microsoft's Code.Fun.Do.

Developed an augmented reality app using Kinect with kinematic analysis, trajectory estimation using 3D meshes and enabling speech recognition, imposing a 3D mesh on a 2D segmented image.

Chain Reaction, Mozilla BootCamp, Top 3.

The game of Chain Reaction for the Firefox OS for mobile. Challenges were faced for the conversion of the web-based game to mobile interface. Used HTML 5, CSS and JS to create a canvas to display the motion.

Game of 29, Android app, Top 3.

A multiplayer version of the game of 29 using ShepHertz multiplayer gaming API for the Android Platform. Integrated various animations to provide the smooth flow for the movement of cards.

Relevant Courses

- Artificial Intelligence
- Information Retrieval
- Social Computing
- Operating Systems
- Algorithms I
- Software Engineering
- Data Structures
- Linear Algebra
- Database Management and Systems
- Machine Learning
- Image Processing
- Graph Theory
- Computer Networks
- Algorithms II
- Formal Languages and Automata Theory
- Probability and Statistics
- Matrix Algebra

Extra-Curricular Activities

Attended workshop on Image Processing and mentored students.

Member of Google Students Club of the institute.

Participated in Inter-Hall Tennis(1st year) and Open-IIT Tennis(1st,2nd year).

Secured 3rd position in Fresher's Basketball Tournament.

Attended National Service Scheme from 2012-2014.