

Divyansh Agarwal

✉ : (divyansha@iiitd.ac.in)

🏠 : (<http://precog.iiitd.edu.in/people/divyansh/>)

☎ : +91-9958256111

🎓 EDUCATION

Netaji Subhas Institute of Technology, Delhi University

New Delhi, India

- *Bachelor of Engineering in Information Technology; CGPA: 8.48/10*
(*Graduated First class with Distinction*)

Aug. 2012 – May 2016

👛 EXPERIENCE

- **Research Associate, Precog Research Lab, IIIT Delhi:** *June 2016 - Present*
 - **#Killfie: Analyzing dangerous selfies on social media** ([link](#)) :
 - Analyzing the reasons for selfie deaths occurring around the world for feature engineering.
 - Building a machine learning based automated warning system to identify dangerous selfies.
 - Modeled the effect of social feedback on dangerous selfie-taking behavior of Instagram users.
 - **Advanced Application for Social Media Analytics (AASMA)** :
 - Full stack developer for an analytics tool to monitor information sharing on social platforms.
 - Implemented functionality for facebook events search, common followers analysis etc.
 - Managed a team of 6 undergrads and interns; Scaled the project to 70+ installations.
- **Research Intern (remote), ERIC Lab, Université Lumière Lyon 2:** *Winter 2016*
 - Developed a state-of-the-art survey of controversy detection techniques in literature.
 - Analyzed performance comparison on a data set of reddit submissions.
 - Currently building a controversy estimation metric using applications of graph theory.
- **Undergraduate Researcher and Developer, CAITFS Group, NSIT:** *2014 - May 2016*
 - **EDR** : A routing protocol for opportunistic networks which routes packets by learning the encounters and distances of nodes from the message destination.
 - **kROp** : Applied unsupervised learning for routing in opportunistic networks; Used K-Means++ clustering technique for next-hop selection in message routing.
- **Infrastructure and Data Science Intern, TrulyMadly Matchmakers:** *Summer 2015*
 - Interned with the data science team of TrulyMadly (India's popular dating app).
 - Built their nudity detection system using transfer learning technique DeCAF.
 - Semi-automated their user uploads moderation process, increasing productivity by 200%.

📄 PUBLICATIONS

- **From Camera to Deathbed: Understanding Dangerous Selfies on Social Media**
11th International AAAI Conference on Web and Social Media - ICWSM 2017. ([PDF](#))
- **Me, Myself and My Killfie: Characterizing and Preventing Selfie Deaths**
ArXiv Report published in Nov, 2016. Our work garnered attention by the likes of Carnegie Mellon, BBC, CNN and MIT Tech Review. The work was also appreciated by the Indian Government. ([PDF](#))
- **EDR: An Encounter and Distance Based Routing Protocol for Opportunistic Networks**
30th IEEE conference on Advanced Information Networking & Applications (AINA 2016). ([PDF](#))
- **kROp: K-Means Clustering based routing protocol for Opportunistic Networks**
Journal of Ambient Intelligence and Humanized Computing (AIHC - Springer). ([PDF](#))
- **Stop the Killfies!: Using Deep Learning to Identify Dangerous Selfies on Social Media**
Accepted at - 9th International Workshop on Modeling Social Media (TheWebConf 2018)

⚙️ PROGRAMMING SKILLS

- **Languages:** C, C++, Python, Java, Ruby, SQL, HTML, CSS, Javascript.
- **Tools and Technologies:** Apache Storm, Ruby on Rails, Flask, d3.js, Matlab, Octave, L^AT_EX, Tensorflow, Selenium, sklearn, matplotlib, RESTful APIs, Gephi, STL, ONE Simulator, Linux.
- **Databases:** MongoDB, MySQL, Redis.

💡 TEACHING ASSISTANT

- **Introduction to Human Computer Interaction course on NPTEL** - (upcoming) Winter 2018. ([link](#))
- **Privacy and Security on Online Social Media (PSOSM) course on NPTEL** - Fall 2017. ([link](#))
- **PSOSM course at IIIT-Delhi, taught by Dr Ponnurangam Kumaraguru** - *Fall 2017*. ([link](#))
- **IIIT Delhi's first Winter school workshop on User Experience and Design** - *Dec 2017*. ([link](#))
- **Summer School workshop on PSOSM by Facebook at IIIT-Hyderabad** - *July 2017*. ([link](#))

🔗 PROJECTS

- **Controversy Detection on OSM** : Completed a state-of-the-art survey of controversy detection and contrastive opinion summarization schemes in literature. Building a controversial topic estimation model using partitioning of the comments network on Reddit.
- **Collaboration network using d3.js** : Built a responsive collaboration graph of all researchers at Precog using the force directed layout in d3.js. ([link](#))
- **Image annotation portal** : Built and deployed a customizable image annotation portal in Ruby on Rails and Javascript. The tool allows multiple users to engage in simultaneous crowdsourcing of information.
- **Characterizing users' selfie taking behavior** : Analyzed upload patterns by Instagram users to model dangerous selfie taking behavior using a time-variant Cox Proportional Hazards model.
- **Howl** : Conceptualized and developed a mobile application for android and iOS that connects you with people with similar interests through activities. Technologies used - proto.io and Ionic framework.
- **Social media monitoring tool (AASMA)**: Feature development of a cyber forensics tool that analyses real-time data from social platforms. I developed and deployed a distributed image analysis architecture using Celery, Apache Storm and Redis, for image tagging, sentiment & OCR.

🏆 ACHIEVEMENTS AND AWARDS

- **Youth@IGF 2017 fellow** : Received a fellowship by Internet Society to attend IGF 2017 in Geneva.
- **Fred J. Hansen Foundation fellow 2015** : Received a fully funded fellowship to represent India at Hansen Summer Institute on Leadership and International Cooperation at University of San Diego.
- **Harvard National Model UN 2014, Boston, MA** : Led NSIT's award winning delegation to HNMUN 2014 as the Operations head; Selected among 1500+ applicants.
- **Director's Merit Scholarship** : Received merit scholarship for exceptional academic performance; Included a tuition fee waiver; Received the honour consistently from freshman till senior year.
- **School Topper in Computer Science** : Secured 99/100 in grade 12th; Received tuition fee waiver.

📖 COURSES/ CERTIFICATIONS

- **Designing Human-Centered Systems, IIIT-Delhi**: Performed Contextual inquiry, Affinity diagramming and Task analysis to develop an android application; Adjudged best course project.
- **Relevant university courses** : Data Structures and Algorithms, Operating Systems, Computer Networking, Database Management Systems, Object Oriented Programming, Distributed Systems, Internet & Web Engineering, Pattern Recognition and Artificial Intelligence.
- **MOOCs** : Algorithms: Design and Analysis by Stanford University; Introduction to Hadoop & MapReduce by Cloudera; Artificial Intelligence CS188x by UC Berkeley; Justice by Harvard University.