RISHAV RAJ AGARWAL

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RESEARCH INTERESTS

- Computational Social Science | Data Sciences | Social Media Analytics | Big Data | Behavioral Analytics

PUBLICATIONS

- Vivek Singh, Rishav Raj Agarwal 2016. Cooperative Phoneotypes: Exploring Phone-based Behavioral Markers of Cooperation.
  2016 ACM International Joint Conference on Pervasive and Ubiquitous Computing, (September 2016).

INDUSTRY EXPERIENCE

EXL Analytics   Sept'16-Present
Assistant Manager
- Provide end-to-end analytical and visualization solutions clients like Wolters Kluwers based on emplylee level data| **VBA, SAS**

INTERNSHIPS

Predicting Financial Trouble   May'16-Jul'16
Dr. Sheng-Wei "Kuan-Ta" Chen (Multimedia and Networking Lab)   Academia Sinica
- Predicted the **propensity to pay bills** on time using credit card transactions and phone logs collected from over 60,000 individuals. **| R**
- **Devised metrics** to collectively predict future financial trouble using pervious months from data collected over two years. |**Python**
- Publication under progress.

Cooperative Phoneotypes   May'15-Jul'15
Dr. Vivek K Singh (Communication & Information)   Rutgers University
- Analyzed **cooperation** trends **using spatio- temporal mobility data** and **survey data** from the **Rutgers Wellbeing Study**. **| R, WEKA**
- **Devised a classifier** to rank cooperators based on anonymized social activity (Call/SmS) collected over 10 weeks from 54 students
- Coined *Phoneotpes*, a set of characteristics observable via mobile phone thus motivating research in a new direction.
- Paper accepted Ubicomp 2016.

RESEARCH PROJECTS

What makes a good relationship?   Jan'16-Present
Dr. Debayan Pakrashi (Economics)   IIT Kanpur
- Identified **socio- economic markers** of a long lasting relationship using **a time series panel data** from over 10,000 individuals.
- Explored time series methods and created a **fixed effect regression** model **| STATA**

Hubness in Music Recommender Systems   Jan'16-Apr'16
Dr. Piyush Rai (Computer Science)   IIT Kanpur
- Implemented several scaling and dimensionality reduction techniques to reduce hubs and predict music using **KNN | MATLAB**
- Tested the model on the **Million Song Dataset** achieving 99% recommendations; and presented a **poster**.

Forecast Use Of A City Bike Share System   Jan'15-Apr'15
Dr. Harish Karnick (Computer Science)   IIT Kanpur
- Used bike sharing data from Capital Bikeshare program to analyze and **predict** bike sharing demand
- Achieved a closing international rank of **593 out of 3252** teams on KAGGLE, a predictive modelling platform.
- Used multiple Machine Learning Techniques: **SVM, Random Forest, Poisson Regression, Mixture Model, Gradient Boosted Regression** and **Classification Trees. | R, PYTHON**

Perceptual Account Of Symbolic Reasoning   Aug'14-Dec'14
Dr. Amitabha Mukerjee (Computer Science)   IIT Kanpur
- Tested Perceptual Manipulation Theory (*Landy et al*) for mathematical reasoning with **guidance from Dr. Landy, Indiana University**.
- Built an **online JavaScript** application and **surveyed** 40 students. **| JAVASCRIPT, MS EXCEL**
- Presented a **poster** at **IIT Kanpur** which was highly appreciated.

Phonetic Spell Checker (Spellnazi)   May'13-Jul'13
Dr. Sumit Ganguly (Computer Science)   IIT Kanpur
- Created a Python based app that corrects spelling mistakes based on their phonetic interpretation. **| PYTHON**
- The app used the double **metaphone** algorithm, **n-gram analysis** and **POS tracking | NLTK, ML**

OPEN SOURCE

ECHO	An educational app for people to learn and master pronunciations.	**SPEECH DETECTION, SPEECH2TEXT.**	2014
Grapevine	Windows 8 app that uses sentiment analysis to find out whether politicians have stayed true to their manifestos	2014
MOODY*!*	Application that analyses a user's mood based on Facebook updates and suggests music| **NLTK, SOCIAL MEDIA**	2013

ENTREPRENEURSHIP

Objectify Technologies *<www.MyObjectify.com>*   Dec'13-Apr'15
MyObjectify is a 3D printing community cum marketplace.
- Created a **Business Plan** for the idea which was among the **ten best startups** at DisruptIt, IIM Bangalore.
- Developed 3d rendering app that displays 3d files on the browser.
- Represented the company at Mumbai Films and Comics Convention (MFCC'14).

EDUCATIONAL QUALIFICATIONS

Year	Degree	Institute	CGPA / %
2016	B.S. Economics (minor: AI)	Indian Institute of Technology, Kanpur (IITK)	7.7 / 10
2011	XII, CBSE	Hariyana Vidya Mandir, Kolkata	85.8 %
2009	X, ICSE	Purwanchal Vidya Mandir, Kolkata	91.4 %

RELEVANT COURSEWORK

Economics	Computer Science	Psychology
Microeconomics-I, II	**Data Structures** and Algorithms	Introduction to **Psychology**
Behavioral Economics	Algorithmic **Game Theory**	**Psychology** of Adjustment
Econometrics I, II	**Machine Learning** Techniques	Introduction to **Cognitive Sciences**
Probability and Statistics	**Artificial Intelligence** Programming	
Quantitative Statistics using R	**Probabilistic Machine Learning**	

AWARDS AND HONOURS

- Winner**, Blog for a Cause** (a nationwide social blogging contest), Techkriti'14.   2014
- Achieved a **perfect score** of 6 (Advanced User) on the iTEP English Proficiency Exam.   2013
- Won **pitch-ur-product** competition in the Entrepreneurship Fest, Esummit'13, IIT Kanpur.   2013
- Secured All India Percentile of **99.3% among 479,651** candidates in IIT-Joint Entrance Exam (IIT-JEE)   2012
- Secured All India Rank **1041 out of 1,170,000** candidates in All India Engineering Entrance Examination (AIEEE)   2012
- Awarded for **outstanding scholastic achievement** by Ladnu Nagrik Parishad with a cash prize.   2012

POSITIONS OF RESPONSIBILITY

Coordinator   2014-2015
Quiz Club
- Managed a team of 12 secretaries to ensure proper conduction of quizzes
- Maximized the online reach and popularity (Facebook/WordPress Blog) **by 200%**
- Organized and **hosted the largest Sports Quiz** at IIT Kanpur with footfall over 300.

Student Mentor   2013-2014
ESC101A, IIT Kanpur
- **Mentored** three first year **students** for ESC101A (Fundamentals of Computing) at IIT Kanpur and aided in grade improvement.

VOLUNTEERING

Manas Primary School   Sept'16-Present
- Teach 5th grade mathematics at an NGO for underprivileged children and prepare them for high school entrance exams.

SKILLS

Programming Languages: Python | C | C++ (STL, Boost) | R

Web Development: JavaScript | HTML | CSS | WebGL (Three.js) | Drupal

Others: LaTex | Git | Matlab | WEKA | Stata

Languages Know: English | Hindi | Bengali | German (Basic Proficiency, Cleared A1)

Creative writing: Produced high researched articles and curated content for campus magazines, Scientia (**Editor**) and Meander (**Editor**)

REFERENCES

Available upon request.