

# Maneet Singh

Assistant Professor (Senior Grade)  
Computer Science and Engineering  
Jaypee University of Information Technology Waknaghat

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## Research Interest

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Computational Social Science, Opinion Mining and Social Network Analysis

## Education

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- ❖ **PhD in Computer Science and Engineering (Under Dr. Sudarshan Iyengar, HOD CSE, IIT Ropar and Dr. Rishemjit Kaur, Principal Scientist, CSIR-CSIO Chandigarh)** Jan 2019 --- Dec 2023 *Indian Institute of Technology Ropar, Rupnagar, Punjab, India*
- ❖ **M.Tech in Computer Science and Engineering** July 2011 --- June 2013 *Dayalbagh Educational Institute, Agra, Uttar Pradesh, India*  
CGPA: **9.22**
- ❖ **B.Tech in Information Technology** July 2006 --- June 2010 *Gautam Buddha Technical University, Lucknow, Uttar Pradesh, India*  
Percentage: **78.84**
- ❖ **Intermediate (ISC Board)** April 2005 --- May 2006 *St George's College Agra, Uttar Pradesh, India*  
Percentage: **90.0**
- ❖ **High School (ICSE Board)** April 2005 --- May 2006 *St George's College Agra, Uttar Pradesh, India*  
Percentage: **82.80**

## Work Experience

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- ❖ **Jaypee University of Information Technology, Wagnaghat, Solan, H.P., India** Dec 2023 --- Ongoing *Assistant Professor (Senior Grade), Department of Computer Science and Engineering/ Information Technology*
- ❖ **Jaypee University of Information Technology, Wagnaghat, Solan, H.P., India** Aug 2023 --- Dec 2023 *Assistant Professor (Grade II), Department of Computer Science and Engineering/ Information Technology*
- ❖ **GLA University, Mathura, Uttar Pradesh, India** Jan 2016 --- Jan 2019 *Assistant Professor, Department of Computer Engineering and Applications*
- ❖ **HITM, Agra, Uttar Pradesh, India** Aug 2013 --- Jan 2016 *Associate Lecturer, Department of Computer Science and Engineering*
- ❖ **K.P.E.C. Agra, Uttar Pradesh, India** Sep 2010 --- June 2011 *Lecturer, Department of Computer Science and Engineering*

## Projects

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- ❖ **Analyzing various social phenomena using data from Twitter**  
Using techniques from data science and natural language processing for understanding public opinion from different aspects:-
  - **Spread of moral values across different cultures:** Using language as proxy for comparing moral concerns of two diverse cultures i.e. English and Japanese from the English and Japanese tweets discussing morality/immorality. It also involves measuring homophily with respect to basic moral foundations for the two cultures.
  - **Public sentiments:** A temporal based assessment of public sentiments towards mucormycosis associated with COVID-19. The sentiment of users related to the demands for utilities such as oxygen, hospital beds and drugs associated with mucormycosis.
  - **Opinion Polarization:** Proposing a novel polarization measure considering the opinion and the network structure of users on Twitter. The proposed measure is tested on various benchmark networks.
  - **Spread of Fake News:** Comparing the spreaders of fake news with spreaders of general tweets based on various attributes such as expressed emotions, tweeting behavior, demographics, etc.

### ❖ **Designing models to study the interplay between opinion dynamics and various social phenomena**

Applying machine learning and social network analysis techniques to study social phenomena such as:-

- **Spread of Fake News:** Developing a continuous opinion based hybrid model that combines the spread of fake news with the dynamics of opinion formation on networks with varying levels of polarization.

- **Polarization:** Employing a reinforcement learning approach to develop an agent based opinion dynamics model for studying the propagation of polarized news.

### ❖ **Using olfactory and gustatory based self-administered test for diagnosis of COVID-19 in India**

A web based survey is conducted among COVID-19 and non-COVID-19 Indian participants to collect various demographic, symptomatic and general information along with the olfactory and gustatory based test using home ingredients. Consequently, machine learning models are developed with the objective to identify the importance of smell and taste loss in the prediction of diagnosis of COVID-19.

## Publications

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### ❖ Journals

- **Morality-Based Assertion and Homophily on Social Media: A Cultural Comparison Between English and Japanese Languages**

Maneet Singh, Rishemjit Kaur, Akiko Matsuo, S.R.S. Iyengar and Kazutoshi Sasahara

Frontiers in Psychology 2021 (**Impact Factor: 3.8**)

- **Twitter Sentiment Analysis for COVID-19 associated Mucormycosis**

Maneet Singh, Hennaav Kaur Dhillon, Parul Ichchpujani, S.R.S. Iyengar and Rishemjit Kaur

Indian Journal of Ophthalmology 2022 (**Impact Factor: 3.1**)

- **Nutritional Anemia: Patent Landscape**

Rishemjit Kaur, Subhankar Mishra, Ivan NevolinDripta Roy Choudhary and Maneet Singh

World Patent Information 2022 (**Impact Factor: 2.7**)

## ❖ Conferences

- **A Bi-level Assessment of Twitter Data for Election Prediction: Delhi Assembly Elections 2020**  
Maneet Singh, S.R.S. Iyengar and Rishemjit Kaur  
Companion Proceedings of the Web Conference (WWW) 2022
- **Mining Social Networks for Dissemination of Fake News Using Continuous Opinion-Based Hybrid Model**  
Maneet Singh, S.R.S. Iyengar and Rishemjit Kaur  
International Conference on Advance Data Mining and Applications (ADMA) 2021
- **Multidimensional Analysis of Fake News Spreaders on Twitter**  
Maneet Singh, S.R.S. Iyengar and Rishemjit Kaur  
International Conference on Computational Data and Social Networks (CSoNet) 2020
- **Using Social Media for Analyzing Mass Views on the Implementation of Citizenship Amendment Act in India**  
Maneet Singh, Rishemjit Kaur and S.R.S. Iyengar  
International Conference on Computational Social Science (IC2S2) 2020  
(*Non-Archival*)
- **Classification of spam email using intelligent water drops algorithm with naive bayes classifier**  
Maneet Singh  
International Conference on Advanced Computing & Intelligent Engineering (ICACIE) 2017
- **Optimization of complex mathematical functions using a novel implementation of intelligent water drops algorithm**  
Maneet Singh and Sanjay Saini  
International Conference on Soft Computing for Problem Solving (SocProS) 2012

## Talks Delivered

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- ❖ **Multilingual Sentiment Identification: Employing English and Hindi Tweets**  
Summer Institute in Computational Social Science-Delhi (SICSS-Delhi) 2022
- ❖ **Deep Learning for Social Media Analytics**  
IEEE SPS Summer School (AcSIR-CSIO Student Branch) 2021

## Others

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- ❖ Co-organized Summer Institute in Computational Social Science-Delhi (SICSS-Delhi) 2022.
- ❖ Served as the Reviewer for the International Conference on Advance Data Mining and Applications (ADMA) 2022 and 2023 ('B' Ranked Core Conference).
- ❖ Currently serving as a Reviewer for the Journal "Frontiers in Psychology".

## Honors/Achievements

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- ❖ Ranked 1<sup>st</sup> in the Faculty Development Program (FDP) organized by Sharda Group of Institutions (SGI), Agra.
- ❖ Qualified GATE (Graduate Aptitude Test in Engineering) for Computer Applications 2010, 2011 and 2014.
- ❖ Qualified NET (National Eligibility Test) for Assistant Professor- June 2013 and Dec 2014.
- ❖ Awarded Director's Medal for securing 1<sup>st</sup> Rank in M.Tech (Computer Science and Engineering).
- ❖ Secured 1<sup>st</sup> Rank in B.Tech (Information Technology)..

## Skills

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- ❖ Programming Languages [C, C++, Java, MATLAB, Python and R (Visualizations)]
- ❖ Languages [English and Hindi]

## Declaration

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**I, hereby, declare that all the details given above are true to the best of my knowledge.**

**Date:** 27<sup>th</sup> Dec 2023

**Place:** Solan, Himachal Pradesh



**Maneet Singh**