# **Iknoor Singh**

| Machine Learning and Natural Language Processing Research Enthusiast |

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#### **EXPERIENCE**

# Natural Language Processing Group, The University of Sheffield, UK - Visiting Researcher

JANUARY - JULY 2020 | Advisors: Prof Kalina Bontcheva and Dr Carolina Scarton

Worked on scraping and development of COVID-19 disinformation corpus, which was used for exploratory analysis and to train a classification aware neural topic model. Also, developed a tool for automated quote source pair extraction from text. This project was funded by the European Commission H2020 Project WeVerify.

# IBM Research Lab, India - Project Intern

JUNE - SEPTEMBER 2020 | Advisor: Dr Sumit Bhatia

As a part of IBM Global Remote Mentoring program, political ideology detection corpus was developed to compare the sentiment scores of news articles belonging to different biases and the results were further plotted and analysed visually.

# Queen's University Belfast, UK - Research Intern

JANUARY - MAY 2019 | Advisor: Prof Deepak Padmanabhan

Implemented three computational formulations of textual coherence drawing upon the state-of-the-art methods in natural language processing, to analyze the textual coherence of fake news articles vis-a-vis legitimate ones.

## **Design Innovation Centre Lab, Panjab University** - Research Intern

JUNE - DECEMBER 2018 | Advisor: Prof Naveen Aggarwal

Implemented a complete text preprocessing pipeline for the clustering of Punjabi text documents. Also, developed a text similarity and plagiarism detection system for the low–resourced Punjabi language. This project was funded by MHRD (Indian Ministry of Human Resource Development).

#### **PROJECTS AND AWARDS**

## **Automatic Evaluation**

- Got 1st prize in an international level hackathon conducted by IIT BHU.

Used natural language processing to build an app for automated assessment of subjective answers by checking the semantic similarity of the solution given by the user with that of the original correct answer in the database and compute marks.

## **Crime Mapping and Prediction**

- Got 3rd prize from over 130 teams in a national level hackathon conducted by Nagarro.

Implemented an algorithm that takes safety as the constraint to compute the safest optimum path from one place to another. Also, deployed a supervised machine learning model for crime prediction at a particular place and at a particular time

## Search Through Video

- Got 1st prize in a hackathon conducted by Panjab University, Chandigarh.

Developed an app to search through the video to find the exact time at which the sub-topic is being taught or discussed in a video. This prevents manual searching through long videos.

#### **EDUCATION**

## The University of Sheffield

PhD in Computer Science Oct 2020 - Present | Sheffield, UK

#### **UIET, Panjab University**

Bachelor of Engineering With Honours, Information Technology Aug 2016 - 2020 | Chandigarh, India CGPA: 8.65/10.0

## **Army Public School**

Higher Secondary, CBSE (Physics, Chemistry & Maths) July 2014 - 2016 | Ambala, India Percentage: 95.6%

#### **SKILLS**

**Programming Languages:** C, C++, Python, HTML, CSS, Javascript

## **Technologies and Frameworks:**

Linux, Git, NLTK, Scrapy, Keras, Matplotlib, scikit-learn, Flask

**General Business Skills:** Good presentation skills, Works well in a team.

#### **ACHIEVEMENTS / LEADERSHIP**

**Scholarship** for working on a project as a part of research collaboration between Panjab University and King Abdulaziz University, Saudi Arabia.

**Shared Task Organizer** at the third Affective Content Analysis workshop@**AAAI 2020** together with Adobe and the UPenn.

Got selected as **Microsoft Student Partner** for the academic year 2017–18.

Technical team lead at **AIESEC**, the world's largest youth-run organization associated with the **United Nations**.

Represented my school at International CBSE Summit 2014.

### **PUBLICATIONS**

Xingyi Song, Johann Petrak, Ye Jiang, **Iknoor Singh**, Diana Maynard, Kalina Bontcheva "Classification Aware Neural Topic Model and its Application on a New COVID-19 Disinformation Corpus", *arXiv preprint arXiv:2006.03354*, 2020 (Link)

Kokil Jaidka, **Iknoor Singh**, Jiahui Liu, Niyati Chhaya and Lyle Ungar "A report of the CL-Aff OffMy-Chest Shared Task: Modeling Supportiveness and Disclosure", in *Proceedings of the 3rd Workshop on Affective Content Analysis @ AAAI (AffCon2o2o)* (Link)

**Iknoor Singh**, Deepak P and Anoop K, "On the Coherence of Fake News Articles", *Proceeding of ECML/PKDD 2020 News Recommendation and Analysis Workshop.* 2020 (Link)

**Iknoor Singh**, Vijay Paul Singh and Naveen Aggarwal, "Comparative Study on Punjabi Document Clustering", in *International Conference on Communication and Intelligent Systems (ICCIS* 2019), India, 2019. (Link)

Pranav Shankar, Rajat Kaushal and **Iknoor Singh**, "Analyzing Varied Approaches for Forecast of Stock Prices by Combining News Mining and Time Series Analysis", in *IEEE International Conference on Computing*, Power and Communication Technologies (GUCON 2019), India, 2019. (Link)

Akanksha Chuchra, **Iknoor Singh**, Vijay Paul Singh and Naveen Aggarwal, "Similarity Analysis & Plagiarism Detection for Punjabi Documents using NLP", in *Proceedings of the 11th Annual ACM India Compute Conference*, Chandigarh, India, 2018. (**Poster**)