Ayush Agarwal

Email : ayushag2@andrew.cmu.edu   •   Contact : 412-933-9225   •   Linkedin : linkedin.com/in/ayush286/
Google Scholar : bit.ly/2Y4yR6P   •   Website : ayush286.tech   •   Github : github.com/sherlock42

EDUCATION

Carnegie Mellon University - School of Computer Science   Pittsburgh, PA
Master of Science in Intelligent Information Systems   *December 2022*
- Coursework: Intro. to Machine Learning, Advanced NLP, Speech Processing

Delhi Technological University   Delhi, India
Bachelor of Technology in Information Technology (CGPA:8.97/10.0)   *July 2021*

WORK EXPERIENCE

University of Technology Sydney   Sydney, Australia
Research Intern - Supervised by Dr. Mukesh Prasad   *Dec 2019 -- July 2021*
- Designed a robust method for detecting different forms of web toxicity including cyberbullying and hate speech by identifying contextual patterns and cost sensitive deep learning methods. Work published in ICONIP 2021. [Link]
- Conducted analysis of COVID-19 research articles by mining the CORD-19 dataset using semi-supervised learning and topic modeling

Information Retrieval and Extraction Lab, IIIT Hyderabad   Hyderabad, India
Research Intern - Supervised by Dr. Vasudeva Varma and Dr. Manish Gupta   *May 2020 -- Dec 2020*
- Improved WikiData knowledge base in low resource languages using named entity recognition, multi-lingual learning and knowledge graphs. Paper published in NTCIR 2020. [Link]

Ubicomp Lab, National University of Singapore   Singapore
Research Intern - Supervised by Dr. Brian Y. Lim   *June 2019 -- Sep 2019*
- Designed a method for masking privacy related features in social media images using deep convolution nets and explaining the masking using heatmaps generated through gradcam technique and activation maps
- Visualized features using weights generated by Generalized Additive Models for enhancing graph readability

IBM Research Lab   Delhi, India
Research Intern - Supervised by Ms. Nishtha Madaan   *Mar 2019 -- May 2019*
- Mined bias in articles of different news sources by scrapping articles and using an attention based network to find words of high importance/attention. Proposed a sensationalism score which combined several aspects of the article such as word centrality, article sentiment and word attention.
- Applied clustering and dimension reduction algorithms to identify abnormal representation of topics in news article and created visualizations for showing topic representation and bias in articles. Paper published at AAAI 2020 (SA). [Link]

Biometric Research Lab, Delhi Technological University   Delhi, India
Research Intern - Supervised by Dr. D. K. Vishwakarma   *Aug 2018 -- Feb 2019*
- Implemented bi-directional RNNs using attention for performing multimodal sentiment analysis on CMU-MOSI dataset. Paper published at IEEE BCD 2019. [Link]
- Modified Xception Net using residual attention network for performing visual sentiment analysis for images. Paper published at IEEE BigMM 2019. [Link]

RESEARCH PROJECT

Biometric Research Lab, Delhi Technological University   Delhi, India
Undergraduate Thesis - Supervised by Ms. Priyanka Meel   *March 2020 -- May 2021*
- Investigated Transformer based models for news credibility analysis using semi-supervised learning. Work published in IEEE ICACCS. [Link]

SKILLS

- **Languages :** Python, C, C++, HTML, CSS, Javascript, SQL
- **Tools and Frameworks :** Keras, Tensorflow, Pytorch, NLTK, Spacy, HuggingFace