Shuvam Shiwakoti

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EDUCATION

Virginia Tech
Master of Science
- Major: Computer Science & Applications

Virginia, USA
Jan'2025 -

Delhi Technological University
Bachelor of Technology
- Major: Software Engineering
- CGPA: 8.56/10

New Delhi, India
2019 - 2023

PUBLICATIONS

- [Analyzing the Dynamics of Climate Change Discourse on Twitter: A New Annotated Corpus and Multi-Aspect Classification](#)
  SHIWAKOTI S.*, THAPA S.*, RAUNIYAR K., SHAH A., BHANDARI A., NASEEM U.
  In 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation (LREC-COLING).

- [MemeCLIP: Leveraging CLIP Representations for Multimodal Meme Classification](#)
  SHAH S.B., **SHIWAKOTI S.**, CHAUDHARY M., WANG H.
  In 2024 Conference on Empirical Methods in Natural Language Processing(EMNLP).

- [NEHATE: Large-Scale Annotated Data Shedding Light on Hate Speech in Nepali Local Election Discourse](#)
  THAPA S.*, RAUNIYAR K.*, **SHIWAKOTI S.**, POUDEL S., NASEEM U., NASIM M.
  In 2023 26th European Conference on Artificial Intelligence(ECAI) (pp. 2346-2353).

- [Breaking Barriers: Exploring the Diagnostic Potential of Speech Narratives in Hindi for Alzheimer's Disease](#)
  RAUNIYAR K., **SHIWAKOTI S.**, POUDEL S., THAPA S., NASEEM U., NASIM M.
  In Proceedings of the 2023 ACL 5th Clinical Natural Language Processing Workshop. (pp. 24–30).

- [Multi-Aspect Annotation and Analysis of Nepali Tweets on Anti-Establishment Election Discourse](#)
  RAUNIYAR K., POUDEL S.,**SHIWAKOTI S.**, THAPA S., RASHID J., KIM J., IMRAN M., NASEEM U.
  In IEEE Access Journal.

- THYMES: A Framework for Detecting Suicidal Ideation from Social Media Posts Using Hyperbolic Learning
  NASEEM U., SHAH S.B., THAPA S. **SHIWAKOTI S.**, ZHANG Q., HU L.
  Accepted at IEEE BigData 2024.

  * denotes equal contribution.

EXPERIENCE

Researcher
James Cook University, Macquarie University; Advisor: Dr. Usman Naseem

Remote
Oct'23 - Present

- Worked on various research projects in computational social science(CSS), social media analysis, low-resource language analysis, and AI for healthcare.
- The studies included hate speech analysis, multi-aspect analysis of text data, LLMs in CSS, etc
- Currently working on multimodal data analysis for climate change-related memes.

- **Undergraduate Researcher** Delhi, India
  Delhi Technological University; Advisor: Priya Singh *Sep'22 - May'23*
  - Investigated and analyzed various methods for vehicle trajectory predictions(VTP) for a thorough survey of the field.
  - Surveyed 43 research articles related to VTP and published the results at a conference.

- **Research Intern** Remote
  Manchester Metropolitan University; Advisor: Dr. Akshi Kumar *Jul'22 - Nov'22*
  - Implementing and exploring various image classification techniques for the classification of different types of diabetic foot ulcers(DFUs)
  - Creating an ensemble approach for DFU classification that leveraged multiple powerful image classification models for effective and reliable classification.

- **Software Development Intern** Remote
  Cloutflow *Jun'22 - Nov'22*
  - Worked with the app development team to develop cross- platform apps using React native.
  - Contributed to web-based(React) projects with the web development team.

- **Technology Intern** Remote
  Global Governance Initiative *Aug'21 - March'22*
  - Worked as a full stack developer to solve business problems end-to-end through tech.
  - Designed and developed a video streaming platform(The Trinity) and a Learning Management System(GGI-LMS).

ACADEMIC SERVICE

Program Committee:

- CHiPSAL: Challenges in Processing South Asian Languages @ COLING 2025.
- MM4SG - Workshop on Multimodal Content Analysis for Social Good @ ICDM 2024.
- VLM4Bio - Workshop on Vision-Language Models for Biomedical Applications @ ACM Multimedia 2024.
- The journal track with Machine Learning Journal (MLJ) in the 11th IEEE International Conference on Data Science and Advanced Analytics (DSAA 2024).
- MM4SG - Workshop on Multimodal Content Analysis for Social Good @ ACM WebConf 2024.
- Climate Activism - Shared Task @ CASE co-located with EACL 2024.

PROJECTS

- **ClimaConvo: Climate change twitter data analysis**
  - Created a comprehensively annotated multi-aspect dataset pertaining climate change discourse in twitter.
  - Conducted through analysis of the tweets through advance topic modeling and sentimental analysis techniques.
  - Conducted experiments with various architecture and established baselines for 6 tasks.

- **NEHate: Hate detection for low resource language**
  - Released a comprehensively annotated dataset for hate detection including multiple target identification for a low resource language(Nepali)
  - Conducted analysis of the tweets and experiments with various architectures to measure baseline results.
- **Neural Style Transfer through Deep Learning**
  - A deep learning project that transfers the styles of one image to another.
  - Build using the PyTorch library and the VGG19 model.
- **Youtube Gemini Chatbot**
  - A chatbot as a Chrome extension that uses transcripts from a YouTube video for QA regarding the video.
  - The backend uses the Gemini API for the QA. Backend built using Node.js and fronted using React.

TECHNICAL SKILLS

- **Programming Languages:** Python, C++, C
- **Frameworks & Tools:** Pytorch, Tensorflow, Flask, NumPy, Pandas
- **Other Tools & Technologies:** AWS, MongoDB, PostgreSQL, Docker, Javascript, React, React Native, NodeJS, Adobe XD, Adobe Photoshop