

# MandarSharma

## Coding

Python/R  
SQL/noSQL  
HTML/CSS  
Docker  
Bash  
L<sup>A</sup>T<sub>E</sub>X

## Libraries

PyTorch/PyG  
Keras/Tensorflow  
Huggingface  
Scikit-learn  
Numpy/Pandas  
NLTK

## Linguistics

Nepali  
English  
Hindi  
Morse Code

## Misc

Writer - [ECS](#)  
Ham Radio Operator  
Cover Artist - [YouTube](#)  
Band - [RaspberryBush](#)

## NLP Researcher - I like Language brewed with Machine Learning.

mandarsharma@vt.edu

<https://people.cs.vt.edu/~mandarsharma/>

<https://github.com/Mandar-Sharma>

## Education

2019-Date **Ph.D.** in Computer Science  
2012-2016 **Bachelors** in Electronics Engineering

**Virginia Tech (VT)**  
**Tribhuvan University (TU)**

## Honors & Awards

2018 **SCI Fellowship** for Ph.D. recipient  
2016 **Ranked First** in the ECE Department  
2014 **National Newspaper** mention in feature article  
2012-2016 **Full Ride Scholarship** based on academic merit

**Rutgers University**  
**Tribhuvan University**  
**Kantipur Daily**  
**Tribhuvan University**

## Research & Engineering

2020-2020 **Machine Learning Intern** **Toyota Research**  
Predictive modeling of throttle response for NASCAR racers based on track features.

- Tuned RNNs, specially LSTMs, for modeling throttle response.
- Led ML essentials seminars for Toyota's mechanical engineering team.

Supervision: Henri Durand, Senior Engineering Manager

2017-Date **Research Assistant** **DARPA, VT, & TU**  
Generation of natural language narratives that portray transformations in causal graphs.

- Built and deployed data-driven NLG engines from scratch.
- Built and deployed transformer based Q&A and Summarization engines.

Supervision: Naren Ramakrishnan, Thomas L. Phillips Professor

Predictive modeling of the 2018 Nepalese general election.

- Built large-scale political-discourse dataset scraping Twitter, Facebook, and YouTube.
- Trained SVMs for discourse analysis - accurately predicted election results.

Supervision: Dinesh Baniya, Subarna Shakya, Professors

2016-2017 **Associate Developer** **Logic Information Systems**  
Governed the Data Warehousing and Business Intelligence efforts of Thailand-based retail conglomerate Matahari with Oracle Retail Analytics.

## Select Publications

- **Sharma, M.**, Muralidhar, N., & Ramakrishnan, N. 2022. Laying Anchors: Semantically Priming Numerals in Language Modeling. Under Review for EMNLP.
- **Sharma, M.**, Gogineni, A., & Ramakrishnan, N. 2022. Innovations in Neural Data-to-text Generation. Under Review for IEEE TNNLS.
- **Sharma, M.**, Brownstein, J. S., & Ramakrishnan, N. 2021. TCube: Domain-Agnostic Neural Time-series Narration. In the 21st IEEE International Conference on Data Mining (ICDM). IEEE.
- Choudhry, A., **Sharma, M.**, Chundury, P., Kapler, T., Gray, D. W., Ramakrishnan, N., & Elmqvist, N. (2020). Once upon a time in visualization: Understanding the use of textual narratives for causality. IEEE Transactions on Visualization and Computer Graphics, 27(2), 1332-1342.