

MandarSharma

Coding

Python/R
SQL/noSQL
HTML/CSS
Docker
Bash
L^AT_EX

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](#)

I like Language - Graphs - Causality, brewed with Machine Learning.

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

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

Education

2019-Date **Ph.D.** in Computer Science
2018-2019 **Abridged Ph.D.** in Information Science
2012-2016 **Bachelors Degree** in Electronics Engineering

Virginia Tech
Rutgers University
Tribhuvan University

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

2019-Date **Research Assistant** **DARPA and Virginia Tech**
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

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

- Tuned RNNs, specially LSTMs, for modeling throttle response.
- Led seminars to teach ML essentials to the mechanical engineering team.

Supervision: Henri Durand, Senior Engineering Manager

2017-2018 **Research Assistant** **Tribhuvan University**
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., 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.