Oyesh Mann Singh

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Education

University of Maryland - Baltimore County, MD — Aug 2017 - Dec 2021 (expected)
PhD in Computer Science — GPA-3.725/4

Lamar University, Beaumont, TX — May 2017
Masters in Computer Science — GPA-3.91/4

Technical Skills

- **Programming Languages** - Python, R, SQL, C++, Java, NodeJS
- **Others** - AWS, Github, PyTorch, NLTK, pandas, sklearn, matplotlib, bash, LaTeX

Professional Experience

Visiting Research Scholar
Human Language Technology Center of Excellence, JHU, MD — **Jun 2019 - Aug 2019**

- Increased the entity-tagged dataset volume by 500% by introducing more Wikidata classes and IDF scores in existing Wikipedia framework especially for Chinese and Russian languages
- Improved the NER F1 score by 4% for Chinese language by pre-training BERT with newly obtained dataset compared to the BERT-base

Data Analytics Intern
Relus Cloud Technologies, Atlanta, GA — **Jun 2018 - Aug 2018**

- Worked on AWS services (Kinesis, Glue, S3, DynamoDB) to build ETL data flow processing upto quarter million records/seconds for OrangeTheory Fitness and McDonald's

Teaching Assistant
Department of Computer Science, UMBC, MD — **Aug 2017 - now**

- Worked 20 hrs/week to assist 30-40 students in their course projects of Data Structure, Computer Architecture and Advance Operating Systems

Software Developer
Department of Chemical Engineering, Lamar University, TX — **Mar 2015 - May 2017**

- Enhanced Chemical Analyzer Barometer(CAB) software by using auto-thresholding technique of Otsu's method and altering kernel size of Canny edge detector using OpenCV/Java
- Improved the usability of Excel Merge Utility software by adding more GUI features and making it easier for PhD students to analyze the data after merging the required parameters from CSV files

Research Projects

- **Abusive Sentiment Detection in South Asian Languages:** **Sep 2019**
  https://github.com/oya163/nepali-sentiment-analysis [PRIVATE]
  Currently, working on dataset preparation to detect abusive YouTube comments on native and code-switched Nepali language
- **Nepali POS tagger:** https://github.com/oya163/nepali-pos [PRIVATE] **Oct 2019**
  Also, working on BiLSTM based Nepali Part-of-Speech tagging project
- **Nepali Named Entity Recognition:** https://arxiv.org/abs/1908.05828 **Feb 2019**
  Completed NER project for low-resource language (Nepali) achieving 86.9 overall F1 score using BiLSTM + Grapheme-level CNN architecture
- **Nepali Text Classification:** https://github.com/oya163/oya-nepali-nlp **Oct 2018**
  Completed text classification project to classify Nepali documents achieving up to 78.561% test accuracy
- **Data Analysis on 311 Dataset:** https://github.com/oya163/R-project **May 2018**
  Led a team of four to analyze and build a predictive regression model to estimate the time taken for a neighborhood in Baltimore based on 311 dataset of 3 million records
- **Unsupervised Learning using JigsawPuzzle as pretext task:** **Sep 2017**
  https://github.com/oya163/oyaTorch/tree/master/JigsawPuzzle
  Developed unsupervised classification algorithm for images based on jigsawpuzzle as a pretext task with accuracy 5% less than that of supervised