

Shivin Thukral

GRADUATE STUDENT

Lucknow, India

☎ (+91) 9450773679 | ✉ shivin.thukral7@gmail.com | 🌐 shivin7

Education

University of Washington

Seattle, WA

M.S. IN COMPUTATIONAL LINGUISTICS

Sep 2020 - PRESENT

- Cumulative GPA (till 4th quarter) : 3.97/4.0

BITS Pilani, Goa Campus

Goa, India

B.E.(HONS) IN COMPUTER SCIENCE AND M.SC.(HONS) IN MATHEMATICS

Aug 2015 - Aug 2020

- Cumulative GPA : 8.31/10.0

Projects

Evaluative Morphology of German Diminutives

GUIDES - DR. SEBASTION PADÓ (PROF.) AND DR. GABRIELLA LAPESA, IMS, UNIVERSITY OF STUTTGART

Dec 2020 - PRESENT

- Motivation to analyse if derivational morphology affects sentiment of words
- Extracted pairs of words with diminutives from DerivBase and their corresponding sentences from SdeWac corpus
- Explored lexicon-based German sentiment pipelines like SentiWS to see difference in sentiment of sentence pairs
- Plan to explore contextualized embedding based sentiment pipelines and see if the effect persists cross-lingually

Distributional Modelling of Cross-Cultural Judgement of Food Terms

[Undergraduate Thesis]

GUIDE - DR. SEBASTION PADÓ (PROF.), IMS, UNIVERSITY OF STUTTGART

July 2019 - June 2020

- Motivation to explore presence of cultural information in distributional vectors of different food terms
- Sentences for each food term extracted from Wikipedia corpus and contextual embeddings formed using BERT Framework
- Models trained to predict norms of people (culture) from embedding space (language) reach upto 0.7 correlation in few aspects
- Cross-lingual models over multiple norms perform better for English embeddings due to richer feature space

Detection of Android Malicious Applications

GUIDE - MR. HEMANT RATHORE (ASST. PROF.), DEPARTMENT OF COMPUTER SCIENCE, BITS PILANI GOA CAMPUS

Dec 2018 - Aug 2019

- Comparison done between performance of traditional ML models and neural networks for file opcodes dataset
- Performed extensive data exploration and experimented with multiple feature selection techniques achieving upto 95% accuracy
- Work done published at EAI International Conference Broadnets 2020 (Springer)

Emotion Analysis of Food Reviews

GUIDE - DR. SWATI AGARWAL (ASST. PROF.), DEPARTMENT OF COMPUTER SCIENCE, BITS PILANI GOA CAMPUS

Sept 2018 - Dec 2018

- Performed decomposition of complex review into smaller, meaningful chunks using NLTK framework
- Mapped each chunk to a single aspect of the product via POS tagging of significant terms and hard-coded lexicons
- Reasonable scores under each aspect calculated via SenticNet framework taking into account impact of negation/interjections/emojis

Work Experience

Avnio

Remote

ML ENGINEERING CONSULTANT

Sep 2020 - PRESENT

- Developed a ML model that parses large RFP documents to detect and separate questions achieving upto 95% accuracy
- Worked on a model for compliance scoring that uses regex to detect chunks within RFP responses which map to low compliance
- Currently working on developing a customer specific Semantic Search model that would search a query over a knowledge base

HW Saver LLP

Remote

DEEP LEARNING INTERN

May 2020 - Dec 2020

- Worked on development of an automatic neural math-word problem solver using PyTorch
- Developed a deep neural model based on seq2seq architecture using LSTMs that predicts target equations upto 70% accuracy
- Built a retrieval model that is able to search over similar math word problems containing LaTeX formatted text as well

Samsung Research Institute

Delhi, India

INTERN

Jan 2020 - June 2020

- Worked on development of robust Automatic Speech Verification (ASV) systems
- Explored various speech spectral features (CQCCs/MFCCs) to develop countermeasures against spoofing attacks
- Deep learning frameworks (ANNs/RNNs) and traditional GMMs implemented to develop generalized countermeasures
- Developed high-performing countermeasure in Python against replay attacks reaching upto an EER of 5% for commercial deployment

Extra Curriculars

Department of Backstage and Infrastructure Management

CO-ORDINATOR

April 2017 - April 2018

- Worked with high-end sound and light equipment for conducting events in college auditorium
- Managed a group of over 60 students overseeing their technical learning
- Worked in college cultural fests as the Audio-Visual and Infrastructure Head

Technical Proficiency

PROFICIENT IN Python | PyTorch | Git

FAMILIAR WITH C++ | TensorFlow | NLTK | Jira

Certifications

Oct 2020 **Natural Language Processing Specialization by DeepLearning.AI**, Coursera

Jan 2020 **Miracles of Human Language : An Introduction to Linguistics**, Coursera

Feb 2016 **CUDA and Deep Learning Training**, NVIDIA

Oct 2015 **Network Management and Security**, Nettech