

Shivkaran Singh

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EXPERIENCE

AMRITA CENTER FOR CYBER SECURITY-CEN | DEEP LEARNING – NLP RESEARCHER

July 2017 – Present | Kollam

- Attention based Neural Machine Translation for Indian languages.
- Statistical & Neural Language Modeling.
- Sentiment Analysis.
- Malicious URL detection.
- Question Answering.

CENTER FOR COMPUTATIONAL ENGINEERING & NETWORKING (CEN) | PROJECT ASSOCIATE

Jan 2017 – July 2017 | Coimbatore

- Named Entity Recognition (NER).
- Unsupervised-Supervised Information Extraction.
- Relation & Entity Extraction.
- Neural & Statistical Machine Translation for Indian Languages.

AREAS OF INTERESTS

- **DEEP LEARNING FOR NATURAL LANGUAGE PROCESSING**
- **STATISTICAL NATURAL LANGUAGE PROCESSING**
- **MACHINE LEARNING FOR TEXT & IMAGE**
- **DATA & TEXT MINING**

EDUCATION

AMRITA VISHWA VIDYAPEETHAM | MASTER OF TECHNOLOGY IN COMPUTATIONAL ENGINEERING

July 2017 | Coimbatore, Tamil Nadu | Cum. GPA: 8.89/10.0 | Silver Medalist

BBSB ENGINEERING COLLEGE | BACHELOR OF TECHNOLOGY IN ELECTRONICS & COMMUNICATION ENGG.

July 2014 | Fatehgarh Sahib, Punjab | Cum. GPA: 7.70/10.0 | First Class

TECHNICAL SKILLS

PROGRAMMING LANGUAGES

Python • R • Matlab • Shell Scripting

OPERATING SYSTEM

Linux • Windows

HANDS-ON EXPERIENCE

Deep Learning: TensorFlow • Keras • Pytorch (beginner)
Machine Learning: Scikit-learn • Weka • LibSVM • GURLS
Natural Language Processing: FastText • NLTK • Gensim • Spacy
Scientific Computing: Numpy • Matplotlib • Scipy • Pandas
Web Scraping: BeautifulSoup • Scrappy
Distributed Frameworks: Apache Spark (beginner)
Documentation Tool: Latex • Microsoft Office • Libre Office

PUBLICATIONS

JOURNAL PUBLICATIONS:

- Attention based English to Punjabi Neural Machine Translation, Journal of Intelligent and Fuzzy Systems, IOS Press – SCI Impact Factor 2017: 1.261

PUBLICATIONS IN INTERNATIONAL CONFERENCES:

- A Simplified Exposition of Sparsity Inducing Non-Convex Penalty Functions for Denoising, International Symposium on Intelligent System Technologies and Applications (ISTA'16), Advances in Intelligent Systems and Computing Series (Springer, Germany).
- Shared Task on Detection Paraphrases in Indian Languages (DPIL): An Overview (Extended Version), Springer.
- DPIL@FIRE 2016: Overview of Shared Task on Detecting Paraphrases in Indian Languages (DPIL), CEUR Workshop Proceedings.
- CEN@Amrita FIRE 2016: Context based Character Embeddings for Entity Extraction in Code-Mixed Text, CEUR Workshop Proceedings.
- CEN@Amrita: Information Retrieval on CodeMixed HindiEnglish Tweets Using Vector Space Models, CEUR Workshop Proceedings.

RELEVANT COURSES

UNIVERSITY COURSES

- Linear Algebra.
- Computational Optimization Theory - Linear & Non-Linear Models.
- Probability & Graphical Models.
- Scientific Computing.
- Neural Networks & Deep Learning.
- Fundamentals of Natural Language Processing.
- Signal Processing & Pattern Classification.

OCW – SCHOLAR

- Linear Algebra by Prof. Gilbert Strang
- Multivariable Calculus by Prof. Denis Auroux
- Probabilistic System Analysis & Applied Probability by Prof. John Tsitsiklis

EDX & COURSERA

- Introduction to Computer Science with Python - Eric Grimson
- Natural Language Processing - Michael Collins
- Neural Network & Deep Learning - Andrew NG

PROFESSIONAL ACTIVITIES & ACHIEVEMENTS

- Silver Medalist in Master of Technology - Computational Engineering & Networking (CEN) for overall academic performance.
- Program Committee Member - Indian Native Language Identification (INLI) - 2017
- Gave a hands-on tutorial on Neural Machine Translation as a part of Workshop on Machine Translation for Indian Languages (MTIL) - 2017
- Technical Program Committee Member - Machine Translation system in Indian Languages (MTIL) - 2017
- Received ACM travel grant for attending & participating in FIRE-2016, Indian Statistical Institute, Kolkata.
- Technical Program Committee Member - Detecting Paraphrases in Indian Languages (DPIL) - 2016
- Organizer at AISec 2017 Workshop: Modern Artificial Intelligence (AI) and Natural Language Processing (NLP) Techniques for Cyber Security.
- First Runner-up in the shared task on Mixed Script Information Retrieval (MSIR) organized at FIRE-2016.
- Participated in tutorial session of the International Conference on Signal Processing and Communication (SPCOM-2016) held at Indian Institute of Science, Bangalore, Karnataka.
- Participated in tutorial session on Decision Trees & Ensemble Learning at Intelligent System Technologies and Applications (ISTA'16) held at LNMIIT, Jaipur, Rajasthan.
- Received Certificate of Merit for participation in Inno-Tech 2014 organized by Pushpa Gujral Science, Jalandhar, Punjab.
- Second position in the Embedded System Hardware Project Competition held at BBSBEC, Fatehgarh Sahib, Punjab - 2013.

REFERENCES

DR. SOMAN K. P.

Head of Department, Computational Engineering and Networking, Coimbatore
<https://www.amrita.edu/faculty/kp-soman>

DR. M. ANAND KUMAR

Asst. Professor, Computational Engineering and Networking, Coimbatore
<https://www.amrita.edu/faculty/m-anandkumar>