Curriculum Vitae

Paritosh Katre

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EDUCATION

- Bachelor of Engineering in Computer Engineering, Vishwakarma Institute of Information Technology (VIIT) - Savitribai Phule Pune University (SPPU), India.
- Expected Year of B.E Completion: July 2020

TECHNICAL SKILLS

- **Languages:** Python, Java, C++
- **Tools & Libraries:** NLTK, Stanford CoreNLP, spaCy, Ktrain, TensorFlow, Keras, scikit-learn gensim, pandas, NumPy, Matplotlib, Plotly, beautifulsoup4, PyTorch, Selenium
- **Database Technologies:** Neo4j, MySQL, SQL, MongoDB
- **IDE and Platforms:** Jupyter Notebook, PyCharm, Google Colab, Tableau, Android Studio, IntelliJ IDEA, NetBeans
- **Version Control:** Git and GitHub

EXPERIENCE

AI-NLP Intern @ Citispotter Limited, Cranfield, UK (June 2020 – Present)

- Implementing deep learning models for NLP applications like Emotion Detection, Aspect-Based Sentiment Analysis, Hate Speech, Insult/Abusive detection, etc.
- Working on **BERT, Transformers, fasttext** and **Attention Mechanism.**
- Utilizing Model Explainers such as **LIME** using *eli5* and *TextExplainer* libraries.
- Performing **resource creation** in terms of datasets, lexicons and research
- Prepared Strategy and Case-Study Reports on research topics like ***"Scope for ML/NLP for assessing Corporate Reputation"*** etc.
- Followed the novel "*work-from-home*" norms of submitting technological outputs with recorded code walkthroughs for the teams overseas.
- Delivered around **15** Work Packages focusing in AI-NLP applications.

Research Intern @ C-DAC, INDIA | Bachelors Thesis Project (April 2019 – May 2020)

- **Organization:** Applied Artificial Intelligence Group, Centre for Development of Advanced Computing (C-DAC), A Scientific Society under Ministry of Electronics & Information Technology, Government of India.
- Developed a *'Pre-crime Tool'* that predicts potential criminal activities from English Unstructured Texts using a Rule-based Classical NLP approach.
- Implemented **NER**, **Co-reference Resolution**, and **Dependency Parsing** to extract **Relation Triples** and develop a **Knowledge Graph** using *Neo4j*.
- Implemented a **Weighted Sum Model (WSM)** in the prediction module.
- **Tech Stack:** Stanford CoreNLP, NeuralCoref, spaCy, Neo4j, Flask, etc.

RESEARCH PUBLICATIONS

Springer ICTIS 2020

[Presented] Paritosh D. Katre, et al., "Survey and Gap Analysis on Event Prediction of English Unstructured Texts", *Springer SIST - Fourth International Conference on ICT for Intelligent Systems (ICTIS 2020)*, 15th-16th May 2020, ISSN: 2190-3018, Ahmedabad, India. **[Scheduled]**

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IEEE IACC 2019

[Published] Paritosh D. Katre, "Text Mining and Comparative Visual Analytics on Large Collection of Speeches to Trace Socio-Political Issues", *2019 IEEE 9th International Advance Computing Conference (IACC 2019)*, 13th -14th December 2019, Tiruchirappalli, India. [Research Paper]
Lead Paper Award of the NLP-Session

Scopus International Journal

[Published] Paritosh D. Katre, "NLP based Text Analytics and Visualization of Political Speeches", *International Journal for Recent Technology and Engineering (IJRTE)*, ISSN: 2277-3878, Volume-8 Issue-3, September 2019, pp. 8574-8579. [Research Paper]

National Conference

[Published] Paritosh D. Katre, "NLP based Text Analytics and Visualization of Political Speeches", in the *Proceedings of National Conference on Recent Advances in Computing (NCRAC 19 – 20 September 2019),* pp. 18-23, Coimbatore, India.
Best Paper Award and ***Cash Prize.***
NCRAC committee **recommended** the paper for publication in *Elsevier Scopus Journal.*

AWARDS

- **Best Paper Award** and **Cash Prize** at NCRAC -2019, Coimbatore.
- **Lead Paper Award** of the NLP-Session at IEEE IACC 2019, Tiruchirappalli.

INDEPENDENT KEY PROJECTS (Refer GitHub for all projects)

- NLP-Big Data based Discourse Analytics and Visualization of Political Speech Transcripts.
- Multi-Dimensional Data Analytics of Road Accidents in India using Python Libraries.
- Song Recommendation System using K-Nearest Neighbor Algorithm
- Salary Predictor: An AdaBoost Learning Model
- Foodify: A food search-suggest Android Application
- Indexed Storing of Patient Data: A JFrame Application for Doctors

SEMINARS / WORKSHOPS / ONLINE COURSES

- **Assisted** in Python Hands-on Session during **"Data Science Basics Workshop"** conducted at the Electronics & Telecommunication Department, VIIT; 23 August 2019.
- **Attended "AI and Data Science Day"** hosted by Aegis School of Data Science at Pune Institute of Computer Technology, India; 19 January 2018.
- **Completed** over 15 Online Courses on **Data Science, Artificial Intelligence (AI),** and **Natural Language Processing (NLP)** from Coursera, Udacity, and Udemy.

EXTRACURRICULAR ACTIVITIES

- Skilled in **Mixing & Mastering** audio-MIDI music on **Digital Audio Workstations (DAW)** like GarageBand, Spitfire Audio, VST3 Plug-ins, and FLStudio.
- **Head of Music** and **Cultural Advisor** at 'Gandharva' and 'Aavishkar', Techno-Cultural Communities, VIIT.
- Music Composer at Geet Dnyaneshwari (fusion of Western and Indian Classical Music).
