

Vitthal Bhandari

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EDUCATION

- **Birla Institute of Technology and Science (BITS) Pilani** Rajasthan, India
Bachelor of Engineering in Computer Science (Minor in Data Science); GPA: 8.32 Aug 2017 - July 2021
Courses: NLP & Computer Vision with Deep Learning, Machine Learning, Information Retrieval, Foundations of Data Science, Applied Statistical Methods, Optimization

PUBLICATIONS

- Khan, R., **Bhandari, Vitthal**, Raman, S., Vyas, A., Raman, A., Roy, M., & Raman, R. (2021). **Image Processing in Retinal Imaging**. In *Teleophthalmology and digital health: A practical guide to applications*. Springer Nature (Submitted).

PROFESSIONAL INTERESTS

- NLP & Language embeddings, MT & Multi-lingual NLP, Audio & Speech Processing, Vision in healthcare

WORK EXPERIENCE

- **Standard Chartered GBS Pvt Ltd.** Remote
Software Developer July 2021 - Present
 - Working as a full stack software engineer at SCB GBS.
- **PayPal** Remote
Intern International Feb 2021 - June 2021
 - Created a metrics dashboard for PayPal's DropZone platform which handles millions of file transfers every hour using ReactJS and ElasticSearch. By sending query through a RESTful API, the dashboard displays visualizations as per the input filters.
- **Standard Chartered GBS Pvt Ltd.** Remote
Software Engineering Intern May 2020 - July 2020
 - Built a RESTful API for TLM Recommendation System using ReactJS and Bootstrap4 with a Flask backend. The system uses ElasticSearch to index the data and produces search results based on the input parameters.
- **Regional Remote Sensing Centre-West, ISRO, GOI** Jodhpur, India
Software Research Intern May 2019 - July 2019
 - Created and traversed through various slices of a 3-D data-set of the human brain (generated via a sample MRI scan) along 3 perpendicular axes using IDL bridged to Python and a VR based HTC-Vive controller.

RELEVANT PROJECTS

- **Sentiment analysis using self-trained word vectors** 🐙 Code
Natural Language Processing Oct 2020
 - Implemented word2vec models (CBOW, skip-gram and skip-gram w/ negative sampling) from scratch using Python and NumPy to train word embeddings on Reuters Corpus using SGD optimizer & then performed sentiment analysis on a movies dataset by implementing a simple RNN.
- **Multivariate time series analytics** 🐙 Code
Time Series Data April 2020
 - Identified and implemented an algorithm for each of an MVTs Regression (Vector Auto Regression), Classification (k-NN w/ Dynamic Time Warping) and Clustering (k-means) application in R.
- **Cross Lingual Document Translator** 🐙 Code
Machine Translation Nov 2019
 - Implemented a translator in Python (*Dutch ↔ English*), using Statistical MT models IBM 1 and IBM2. Maximum accuracy measured using cosine similarity was 0.507 and using Jaccard coefficient was 0.349.
- **Wind Speed Forecasting using SARIMA Modeling** 🐙 Code
Prediction and Forecasting Nov 2019
 - Analyzed solar and wind energy for Charanka Solar Park (Gujarat) using hourly data and forecasted the wind speed for Jan 2011 by observing the existing time series trend from 2000-2010 with a MAPE of 19.4%.

SKILLS

- **Programming languages:** Python, Bash, R, Java, C, C++
- **Tools and Frameworks:** Tensorflow, Scikit-Learn, Keras, Elasticsearch

CURRENT WORK

- **Project: Improving current state-of-the-art in self-supervised clustering approaches for speaker diarization:** Work in Progress; Project deals with diarization in audio clips ("who spoke when?"); Working under Dr. Poonam Goyal (Assoc. Prof., BITS Pilani)

VOLUNTEER EXPERIENCE

- **Student Volunteer:** AISTATS 2021 Conference, SIGIR 2021 Conference
- **Academic Mentor:** Worked as an academic mentor in the Students' Mentorship Program during the academic year 2018-19 for teaching sophomores of 2018 batch

CERTIFICATIONS

- **Coursera** *Deep Learning Specialization*
- **Linkedin** *Advanced NLP with Python for Machine Learning* | *Learning Bash Scripting*