# **Shreyas Lele**

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# **Summary**

- Successfully completed research projects based upon Reinforcement Learning, Time series forecasting, Neural Machine Translation and have published multiple research papers in these domains.
- Accomplished in handling end-to-end cloud based development projects from architectural designing to complete on-cloud deployment.
- Experienced in cloud computing, industrial analytics, server development.
- Interested in working on research oriented projects in machine learning and artificial intelligence domain.

# **Education**

## • B. Tech in Information Technology

Veermata Jijabai Technological Institute | July 2015 - May 2019 | CGPA - 8.15

# **Professional Experience**

#### • Aspire leadership program - Software Engineer | Baker Hughes, Mumbai | July 2019 - present

Gained experience in cloud computing, analytic models, cloud-based application development. Accomplished end to end projects based on industrial analytics and automated deployments. Completed multiple leadership trainings on a global platform.

### • Intern | Samsung Research Institute, Bangalore | May 2018 - June 2018

Accomplished complex servers development projects for public emergency services communications on voice over LTE.

## • Intern | Bristlecone, Mumbai | May 2017 - June 2017

Completed a basic chat bot development training and involved in development of an internal company portal.

## • Intern | Exxon Automation Pvt. Ltd., Mumbai | May 2016 - June 2016

Contributed in project digitalization of the Mumbai University Admission Process. Responsibly handled on-production data of more than 3 lakh applicants.

# **Publications**

- Kavit Gangar, Hardik Ruparel, and **Shreyas Lele**, Hindi to English: Transformer-Based Neural Machine Translation, Springer's ICCCES 2020 (accepted, in process for getting published)
- Lele, Shreyas and Gangar, Kavit and Daftary, Harshal and Dharkar, Dewashish, Stock Market Trading Agent Using On-Policy Reinforcement Learning Algorithms (April 21, 2020), Elsevier's SSRN(<u>link</u>)
- Lele, Shreyas, Oil-well Flow-Rate Forecasting Using Auto-Regressive Model (December 12, 2019), Elsevier's SSRN(<u>link</u>)
- Shreyas Lele, Analysis of Well Head Pressure Sensor Data for Anomaly Detection in Oil Well using IIoT and Unsupervised learning Technique, IRJET vol:06, issue:10, Oct 2019 (link)

# **Projects**

## • Transformer-based Neural Machine Translation for Hindi to English | Aug 2020

Developed a model for neural machine translation for low-source Hindi language to English using transformer, Byte pair encoding and back translation and achieved state-of-the-art scores of the evaluation metrics.

#### • Forecasting flow-rate for oil-well using autoregressive model| Dec 2019

Analysis and prediction of the flow-rate, based on continuous data from sensors mounted on the oil well using ARIMA models and PCA.

#### • Anomaly detection using Unsupervised learning | Oct 2019

Detected the anomalies in the time-series data of the well head pressure sensors using isolation forest.

## • Stock trading agent using reinforcement learning Aug 2018 - Mar 2019

Developed an intelligent trading agent which trades stocks using on-policy reinforcement learning algorithms.

Constructed an OpenAi gym compatible environment which simulates a stock market in which an agent can take trading decisions to earn rewards.

## • ABU Robocon 2017 (national robotics competition) | Dec 2016 - Mar 2017

Developed as a team, a partially automated bot for holding and shooting frisbees which uses line-following for movement.

Determined visual feedback using Computer Vision and Microsoft Kinect.

## Virtual musical instruments, SRA, VJTI | May 2016 – July 2016

Constructed a system of virtual drums and keyboard, playable by moving hands in mere air Accomplished motion detection using Microsoft Kinect and programmed using C++.

## **Skills & Interests**

Computational: C++, Python, NodeJS, SQL

**Domains:** Machine Learning, Time-Series Analysis, Cloud-Computing, Conceptual-Designing, Application

development, Cloud Deployment

Linguistic: English, Marathi, Hindi

Other: Cricket, Football, Guitar, Computer Gaming

## Other activities

- Completed Deep learning specialization (deeplearning.ai).
- Completed 2 week professional leadership trainings with Baker Hughes at Houston, TX.
- Delivered lectures and workshops based on Overview of Machine Learning, basics of Embedded C programming, motion sensing, line following robots, basics of computer vision to juniors at VJTI's Society of Robotics and Automation.
- Involved in sponsorship & event coordination team for VJTI's Sports fest .
- Represented and captained the school's cricket team for inter school tournaments.