

# ABHINAV THORAT

Machine Learning Engineer, TCS Research

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## SUMMARY

Passionate machine learning professional and data-driven analyst with 3.2+ years of experience with the ability to apply Machine Learning & Deep Learning techniques and leverage algorithms to solve real-world business problems. Established ability to deliver predictive models across different industries to accurately forecast consumer behavior and deliver proven results.

## EXPERIENCE

### Research Engineer

Sony Research India

Jan 2023 – Present

- Working in the domain of machine learning and causal inference.

### Deep Learning Engineer

Investment Intelligence - TCS

April 2021 – Jan 2023

- Engineered Deep Learning Models for Platform which is a comprehensive suite for solutions to real-world Business problems revolving around dynamic personalization using ML/DL.
- Implemented Optimization of Deep Learning model for Platform, which can be leveraged by the customer to improve ROI.
- Delivered State of the art Deep Learning models for generating insights and decision making.
- Designed analytical charts & visualizations for Integration with Platform to simplify Decision Making for customer based on Model Insights.
- Collaborated with Researchers to develop and brainstorm algorithms for improving models.
- Delivered Sales Upliftment model for Customer segmentation based on principle of causal inference to categorize customers for Ad/Offer Exposure to improve ROI.
- Delivered Multi-touch Attribution Model with Attention Modelling algorithm and LSTM approach for Understanding impacts of Campaigns and Channels in revenue generation.
- Tools: TensorFlow, PyTorch, Sci-kit Learn, Pandas, Numpy, PyCharm, Git-lab

### Machine Learning Engineer

Liquid Intelligent Technologies - TCS

Nov 2019 – Apr 2021

- Developed Time series Forecasting Model with RNN-LSTM approach to be integrated with the application for dynamic billing.
- Proposed ML model ideas to Business Unit for leveraging user's data to improve revenue.
- Implemented Recommendation Engine that can be integrated with application to suggest new services/plans to customers with collaborative filtering approach.
- Tools: Tensorflow, Sci-kit Learn, Pandas, Numpy, Jupyter Notebook.

## TECHNICAL SKILLS

Machine Learning    Deep Learning    CNN  
AWS    GCP    GRU    Deep Neural Networks  
LSTM    Data Analytics    Causal Inference  
Data Visualization    RNN    Statistics  
Regression    Classification    Clustering  
Supervised Learning    Unsupervised Learning  
Decision Trees    Boosting    Random Forest

## LIBRARIES & TOOLS

Tensorflow    PyTorch    Scikit-Learn  
Keras    Numpy    Scipy    Pandas  
Seaborn    Statsmodels    OpenCV  
PyCharm    Jupyter Notebook    Spyder  
Visual Studio Code    Anaconda3    AWS  
JupyterLab    IBM Watson    Atom

## EDUCATION

PGD in Data Science (Deep Learning)

Indian Institute of Technology, Madras

Dec 2022 - Present

Bachelor of Engineering.  
in Electronics & Communications

Dr. D. Y. Patil Institute Of Technology,  
Pune University, CGPA: 7.1

June 2014 – May 2018

Higher Secondary School  
in Computer Science

RLT College Of Science, Akola , CGPA: 8.2

June 2013 – June 2014

## PROJECTS

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- **Uplift Modeling for Customer Segmentation:** Developed Deep Learning Model to categorize customers in 4 Categories based on factual treatment effect and counterfactual treatment effect, on principle of causal inference, programmed in Tensorflow.
- **Multi-Touch Attribution Model:** Developed Attention Model with LSTM for understanding attribution(weights) for campaign in Temporal sequence marketing data for budget allocation and improvisation in overall revenue, along with baseline models like Last touch, First touch, Equal attribution and Time decay.
- **BERT Based Customer Sentiment Analysis:** Developed sentiment analysis using pre-train BERT model for sentiment analysis on Customer review, to generate a score for satisfaction.
- **Time Series Analysis:** Developed time series forecasting on user's call time data over the last year to generate forecast for next month usage for dynamic billing.
- **Real Time Sign Language Detection:** Computer Vision project to detect real-time signs for sign language by using SSD-MobileNetV2 Deep Learning model by Tensorflow. Developed for top 10 most frequent signs. (Personal Project)

## COURSES & CERTIFICATIONS

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- Fine Tune BERT for Text Classification with TensorFlow. (Hands-on project.)
- Deep Learning Specialization By Andrew Ng (5-Course Specialization, DeepLearning.ai)
- Stanford University Machine Learning Certification By Andrew Ng.
- Data Science Professional Certification By IBM (10-Course Specialization)
- Machine Learning A-Z Hands-on in Python & R in Data Science.
- Complete TensorFlow 2 and Keras Deep Learning Bootcamp.
- Python for Time Series Data Analysis.

## ACHIEVEMENTS

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- Founded 'Astromate' Instagram community, 80K Followers, content based on Astronomy, Astrophysics.
- Collaborated with Adobe on "Win with Platform - Best Innovative Idea" for Deep Learning on Adobe Experience Platform.
- Cleared TCS Digital 2021.
- Best Team Award TCS 2020.
- First Prize in ICICI StockMind Competition.

## INTERESTS & HOBBIES

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- Writing Blogs on Astronomy, Astrophysics.
- Reading Books on Various Topics.
- Playing Electric Guitar.
- Playing Chess.
- Solving Rubik's Cube, Mirror Cube.