

# Archisha Chandel

Mumbai — India

 iamarchisha  iamarchisha  
 chandelarchisha@gmail.com  +91 7021 754 504

## Academia

### B.E. in Computer Engineering

GPA: 8.0/10.0

University of Mumbai — Bharati Vidyapeeth College of Engineering

2016 - 2020

- Degree focus on Data Structures & Algorithms, AI/ML Applications and Engineering Mathematics

### Data Science Masters Program

GreyAtom

2020 - 2021

- Coursework in ML concepts, Industrial Application of AI, Deep Learning, NLP and a Final Capstone Project

## Work Experience

### Data Scientist

Fractal Analytics

Multinational AI company helping global Fortune 100 companies power every human decision

Sep'21 - Aug'22

- Researched and implemented **GANs** for synthetic data generation with average performance gap of 6% to overcome data scarcity & complexity such that inter data and intra feature relationship is maintained
- Determining success of campaigns - Addressed model decay due to **concept drift** by performing EDA, enhancing data processing pipeline, verifying consistency using PSI score & examining ML model stability
- Product promotion optimization - Formulated PPG and used **demand forecasting** to achieve business goals

### AI Research Scientist

Tessact Pvt Ltd

Assisting the transformation of businesses through innovative video recognition technologies

Feb'21 - Aug'21

- TV content compliance - Annotated media using object detection algorithm with **ResNet50** as backbone
- Enhanced baseline model accuracy by **12%** using feature analysis and data processing techniques
- Utilized **AWS S3** for data management; **SageMaker** for annotation, training and deployment of the model
- Improvised range of features provided by analytics platform by adding 6 new features to make it user-friendly
- Articulated a thesis and **white paper** on the system of models developed during the course of the project

### Machine Learning Engineer

AI Monk Labs Pvt Ltd

Building CV-Tricks, a blog platform providing practical methods used in computer vision solutions

Jan'21 - Feb'21

- Researched concepts of image classification and **data imbalance** in the field of Computer Vision
- Studied implementation and limitations of popular network architectures like ResNet and **EfficientNet**
- Articulated proof of concept method and performed testing on real-world datasets

### Machine Learning Engineer

Tvarit GmbH

Solutions for all manufacturing problems and data science needs

Dec'19 - Feb'20

- Developed algorithms to reduce scrap in manufacturing industry and integrated with AI platform
- Built business value dashboards using Grafana to visualize results obtained during development
- Designed algorithms for statistical analysis & pre-processing of the data and prepared technical reports
- Customer segmentation and price optimization - Led a project on prediction of ambient conditions in a retail store to maximize profits - Bagged **first place** in the competition by European Data Incubator(EDI)

## Volunteer Experience

### Machine Learning Mentor

Upwork

Freelancing platform

Jun'21 - Dec'21

- Mentored 3 individuals for a machine learning course and helped them to implement projects
- Helped them learn simple and **multilayer perceptron** construction and its application on real-world datasets
- Guided them for a projects like Time-series weather forecasting for **predictive maintenance** using **LSTM**

### Open-Source Contributor

Mozilla

Project PRESC, a toolkit for the evaluation of machine learning classification models

Feb'20 - May'20

- Achieved position in **top 3 contributors** for PRESC project during the contribution period
- Exhaustive research, experimentation and report development on **model suitability** & evaluation techniques
- Solved issues on visualization & learning from misclassification, traversal of space in train-test, cross-validation split, evaluating importance of training data points, understanding **covariate shift** in dataset

## Positions of Responsibility

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### Club President

Toastmasters International

Nonprofit educational organization that teaches public speaking and leadership skills

Jan'22 - Jun'22

- Helped the club achieve Distinguished title and **won International Speech Contest** at the Club & Area level
- Completed all 5 levels of Presentation Mastery pathway with **12+ public speeches** as a motivational speaker

### AI Mentor for Uplift Project

GirlScript Foundation

A global-remote initiative for people providing a platform for learning

Jun'20 - Aug'20

- **Mentored 15 students** working on the machine learning project 'Credit Card Fraud Detection'
- **Delivered lectures** on implementing deep learning and neural networks algorithms for projects

## Other Projects

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### Hackathons.....

AIDL (Artificial Intelligence & Deep Learning)

Unifynd

- Solution to extract necessary information from the given invoice or a bill — [GitHub](#)
- Utilized **semantic segmentation** techniques to segment each required field in the invoice or a bill
- Used **text recognition** techniques to generate the information from each of the required field

HumAIn

TCS

- **Natural language processing** (NLP) project to build the taxonomy given text data — [GitHub](#)
- Designed data-processing techniques after EDA to give more weightage to important keywords in the data
- Tested algorithms like **MLKNN, SGD, LR** with OneVsRest to finalize the model and get the best result

### Personal projects.....

Multistep Timeseries Prediction — [GitHub](#)

- **Probabilistic forecasting** of a wind generating system to assist in decision making and predictive maintenance
- Developed a codebase to generate the different time series LSTM models based on user configurations

Flask Projects

- **Python Speech to Text** — Using Google **speech recognition API** for transcription — [GitHub](#)
- Licence Plate Detection — OCR using **OpenCV & tesseract** with deployment on AWS — [GitHub](#)

## Additional Learning

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### Online Courses.....

TensorFlow in Practice (4 courses) — [Certificate](#)

DeepLearning.AI

- Focused on applying machine learning skills with **TensorFlow** to build and train powerful models
- Developed multiple projects with minimal code using TensorFlow & maintained all projects on [GitHub](#)
- Covered topics — Convolutional Neural Networks, Natural Language Processing, Time Series Prediction

Nanodegree Program: Intel® Edge AI for IoT Developers — [Certificate](#)

Udacity

- Leveraged OpenVINO™ Toolkit to fast-track development of high-performance CV and DL applications
- Identified key hardware specs and utilized DevCloud to test model performance on various hardware types
- Course [GitHub](#) — [People counter](#) — [Smart Queue Monitoring System](#) — [Computer Pointer Counter](#)

Scalable Machine Learning on Big Data using Apache Spark — [Certificate](#)

IBM

- Focused on developing skills to scale data science and ML tasks on Big Data sets using Apache Spark
- Designed multiple **PySpark** pipelines like data analysis, processing also feature engineering, model building
- Course [GitHub](#) — Guide to learn and use Spark with Python through PySpark with resources

### Conference.....

- Computer Vision and Pattern Recognition (CVPR), Nashville, 2021
- Deployable AI, Robert Bosch Center for Data Science and Artificial Intelligence, IIT Madras, 2021

### Papers.....

- *AI Game BOT* (2020) - International Journal for Science and Advance Research In Technology, 6(5) by Archisha Chandel, Tejal Kadam, Akanksha Dubey, Prof. Rahul Patil
- *Sales Prediction System using Machine Learning* (2019) - International Journal of Scientific Research and Engineering Development, by Archisha Chandel, Akanksha Dubey, Saurabh Dhawale, Prof. Madhuri Ghuge

## Skills

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**Programming**

Python, Spark, Git, Docker, Tensorflow, Keras, Scikit-Learn, AWS Sage Maker, Pandas

**Administrative**

Management and planning, Communication, Public speaking

**Hobbies**

Fine arts, Graphic designing, Reading fiction novels, Baking