

# Abhishek Ghoshal

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## EDUCATION

**University of Southern California**, Los Angeles, CA

Master of Science in Applied Data Science

Jan 2022-Dec 2023

GPA 3.85

**Xavier Institute of Engineering(University of Mumbai)**, Mumbai, India

June 2016-Oct 2020

Bachelor of Engineering (Computer Engineering)

GPA 9.12

## SKILLS AND CERTIFICATIONS

- **Programming Languages:** Python, Java, C
- **Database:** SQL, Firestore, Firebase, GCS, BigQuery
- **Web Development and Frameworks:** Flask, Streamlit, HTML 5.0
- **Tools and Libraries:** Tensorflow, Pandas, NumPy, Jupyter Notebooks, AI Platform Notebooks, Scikit Learn, Tensorflow Serving, OpenCV, Matplotlib, Seaborn, TA-lib, H2o, Sweetviz, Shapely, Huggingface
- AWS Certified Solutions Architect - Associate Fall 2020
- GCP Certified Associate Cloud Engineer Fall 2020
- Bombay Stock Exchange: Courses on Stock Markets, Technical Analysis, Finance and Accounts Fall 2019

## EXPERIENCE

**Machine Learning Engineer | Quantiphi Analytics, India**

Aug 2020-Aug 2021

- Developed a machine learning and deep learning based solution to detect ransomwares on a POC project. Analyzed over 1 petabyte of data through BigQuery and sampled it down to 35GB for analysis and modeling.
- Led analysis on file related data to identify anomalies and coordinating with clients for better scope management.
- Mentored teammate on another project for tensorflow and AutoML tasks.
- Implemented an image based engine defect detection system for an assembly line slated to save ~\$400,000 per month for an automobile conglomerate on a production grade project. Improved accuracy from 9% to over 80%.
- Supported deployment and cloud team during crunch time for fast tracking tasks.

**Machine Learning R&D Intern | Omniaz, Singapore**

Mar 2020-Apr 2020

- Optimized image matching through R & D using FAISS, contrastive loss, siamese networks.

## PROJECTS

**AI Stylist**

Spring 2022

- Created a fashion outfit creator leveraging XGBoost and Google Vision with a focus on helping people affected by color blindness. Built a web app using Streamlit and Firestore to detect colors, classify 10 separate clothing items, add clothes to users' digital wardrobe and recommend an outfit.

**Stock Market Project**

Spring 2021-Ongoing

- Designed a program to recommend stocks using technical & fundamental analysis and deep learning.

**AI Pet**

Spring 2020

- Utilized deep learning, robotics, and internet of things to create an AI pet robot capable of performing face recognition, expression recognition, speech recognition, user tracking and following and playing Rock, Paper, Scissors.

## ACTIVITIES

- Assistant General Secretary and Head of Finance Committee 2018-19
- Initial Grade, Grade 4 Electronic Keyboard and Grade 1, Grade 2 Piano from Trinity College London

## HONORS AND AWARDS

- Recipient of the Joan and Frank Trocki Scholarship for Best Overall Student (Batch of 2020) Spring 2021
- 1<sup>st</sup> Place in Project Exhibition held at Spandan 2020(AI Pet) Summer 2020
- 1<sup>st</sup> Place in Coding Hackathon 2019 held at Xavier Institute of Engineering Fall 2019

## PUBLICATIONS

- "Classification of Breast Cancer Using Machine Learning" in *International Journal of Information and Computing Science*, Volume 6, Issue 5, May 2019.
- "OpenCV Image Processing for AI Pet Robot" in *International Journal of Applied Sciences and Smart Technologies* Volume 03, Issue 01, June 2021
- "Hardware Architecture and Implementation of AI Pet Robot" in *International Journal of Applied Sciences and Smart Technologies* Volume 02, Issue 02, December 2020
- "Stone, Paper, Scissor Mini-Game for AI Pet Robot" in *International Journal of Applied Sciences and Smart Technologies* Volume 03, Issue 01, June 2021