

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 3.89

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, PySpark, Jupyter Notebooks, AI Platform Notebooks, Scikit Learn, Tensorflow Serving, OpenCV, Matplotlib, Seaborn, Map Reduce, TA-lib, H2o, Sweetviz, Shapely, Huggingface, statsmodels, Pytorch
- 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

Incoming Course Producer for DSCI 551: Foundations of Data Management | USC, California

Aug 2022

- Graded assignments, projects and lab work and helped the students of the Fall 2022 batch during office hours.

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

Statistical Stock Market Analysis

Summer 2022-Ongoing

- Generated and cleaned significant stock related data. Performed initial statistical tests to determine predictor significance. Built baseline models and undertook feature engineering from technical indicators.(Ongoing)

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 Scoring

Spring 2021-Summer 2022

- Designed a program to recommend stocks using technical & fundamental analysis to score the stocks capable of generating 0.5% to 2.5% returns per month(calculated through backtests).

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
- 1st Place in Project Exhibition held at Spandan 2020(AI Pet) Summer 2020
- 1st Place in Coding Hackathon 2019 held at Xavier Institute of Engineering Fall 2019

PUBLICATIONS

- "OpenCV Image Processing for AI Pet Robot" in *International Journal of Applied Sciences and Smart Technologies* Volume 03, Issue 01, June 2021
- "Stone, Paper, Scissor Mini-Game for AI Pet Robot" in *International Journal of Applied Sciences and Smart Technologies* Volume 03, Issue 01, June 2021