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# Atharva Bhagwat

GitHub: atharva-bhagwat
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## Education

**Master of Science in Computer Science**, *New York University.* **GPA: 3.56** Sept 2021 - Present
**Bachelor of Science in Computer Engineering**, *University of Pune.* **GPA: 8.45** Aug 2016 - May 2020

## Technical Skills

| | |
|---|---|
| **Languages and Libraries** | Python, MySQL, R, OpenCV, Tensorflow, Pandas, Numpy, Scikit-Learn, Flask, PyTorch |
| **Tools and Services** | Google Cloud Platform, PuTTY |
| **OS and Version Control** | Linux, MacOS, Windows, Git |

## Technical Experience

**Computational Biology Intern** **May 2022 — Aug 2022**
*Tsankov Lab, Mt. Sinai Medical School* *New York, USA*

- Setup pipelines for detecting single nucleotide variants in single cell RNA-sequencing data.
- Developed a tool to detect somatic mutations in single cell RNA-sequencing data.
- Analyzing bulk and pseudo-bulk data for Lung Adenocarcinoma and Colorectal cancer to predict type of mutations using classifiers.

**Machine Learning Engineer** **Oct 2020 — May 2021**
*ResoluteAI.in* *Bangalore, India*

- Led development of an automation project to count yield and detect anomalies for a textile industry.
- Built pipeline to collect and auto-annotate data using YOLOv4.
- Developed pipeline using stacked machine learning models to feed inputs to the core logic.
- Designed and developed relational database using MySQL to generate reports.
- Worked closely with the stakeholders to build efficient application according to their requirements.

**Machine Learning Engineer Intern** **July 2020 — Sept 2020**
*ResoluteAI.in* *Bangalore, India*

- Developed proof of concepts for face recognition using CNN and minimum distance classifier, attendance management using YOLOv4 and area mapping.
- Developed efficient pipelines using Google Cloud Platform to display analysis generated by POCs on dashboards.
- Worked on developing parallel pipelines using Flask to perform computations at higher speeds.

**Machine Learning Engineer Intern** **July 2019 — Sept 2019**
*AI Technology and Systems* *Milpitas, USA (Remote)*

- Performed exploratory data analysis on 'Titanic' dataset and building various types of classification models to understand their working.
- Compared results based on metrics like: accuracy, f1 score, ROC curve, AUC, time taken to train.
- Compiled and presented the findings at AITS Summit 2019.

## Projects

**Image Sorter** **June 2021 — June 2021**

- Developed an application for easy sorting of images in different classes for dataset creation.

**Unsupervised Video Summarization** **June 2019 — May 2020**

- Performed literature survey to understand previous approaches.
- Implemented algorithm to detect shot boundaries as part of research.
- Worked on a cycle-GAN architecture to develop unsupervised video summarizer for a dataset.

**Visualization of CNNs and Effects of Adversarial Examples** **December 2018 — May 2019**

- Performed literature survey to understand interpretability of CNNs.
- Worked with MNIST dataset to understand outputs after every hidden layer.
- Literature survey on Fast Gradient Sign Method to generate adversarial examples from MNIST set.
- Compiled results and delivered a seminar as part of a course.

## Activities

Winner of Tandon Made Challenge 2021 2021
Captain of PICT Table Tennis Team 2017 — 2020
Member of PICT ACM Branch 2016 — 2017