

# INDRANIL PATIL

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## EDUCATION

### Master of Science, Data Science

Aug 2021 - May 2023

San Jose State University, San Jose, CA

Relevant Coursework- Database Systems Principles, Linear Algebra, Applied Probability and Statistics, Machine Learning, Web Intelligence, Topics in Artificial Intelligence.

#### Course Projects.

##### Motion Transfer for Video Conferencing.

February 2022- May 2022

- Aimed to build, train, deploy GANs based on Nvidia's paper One-Shot Free View Neural Talking Head for Video Conferencing.
- Developed convolution neural networks with PyTorch to estimate motion, keypoint detector, head pose estimator.
- Trained a generator to generate image inducing motion from driving video into source image.
- Implemented asynchronous video capture and created virtual camera with OpenCV to deploy model in real-time video conferencing.

##### Malaria Detection Using Blood Smear Images.

September 2021- December 2021

- Developed robust classifiers with CNN, VGG-19 & ResNet-50 to identify malaria in red blood cells (RBCs) smear images. Tuned CNN hyperparameters for less computationally expensive model.

### Bachelor of Engineering, Computer Engineering

Aug 2015 - Jan 2020

Savitribai Phule Pune University, Pune, India

Relevant Coursework - Data Mining and Warehousing, Data Analytics, Advanced Data Structures, Intro to Machine Learning, Object Oriented Programming.

#### Course Projects.

##### Recapped: Automatic Text Summarizer.

August 2018 - June 2019

- Lead team of four to develop text summarizer adopting hybrid approach.
- Modelled data input into processable form using NLTK.
- Implemented extractive algorithms to minimize and optimize parameters to be further utilized to create more human-like summarization.
- Engineered a model employing n-gram techniques to replace words with summarized forms.
- Evaluated summarizer model with BLEU & ROGUE metrics, ensuring human-like summaries.

##### Crypto-Currency Analysis.

August 2017 – December 2017

- Organized data and values of various crypto currencies and cleaned datasets.
- Assembled presentable insights and visualized data using Pandas.
- Produced plots and charts of fundamental changes in currency using Matplotlib.
- Implemented a prediction model by applying both basic & advanced machine learning models.

## TECHNICAL SKILLS

Programming: Python, R, Java, C++, C

Tools: Excel, Git, AWS, Azure, Nginx, Docker (Basics)

Frameworks: PyTorch, Scikit-Learn, SciPy, Keras, NLTK, Seaborn, Matplotlib, Plotly, TensorFlow, Flask, NumPy, Pandas.

Databases: Oracle DB, MySQL, PostgreSQL, MongoDB, IBM DB2

## SOFT SKILLS

- English (Professional), Marathi (Native), Hindi (Native).
- Problem solving ability and Decision Making.
- Able to focus on tasks with attention to detail and accuracy.
- Ability to work in challenging environment and learning from adverse situations.