

SAURABH JOHRI

MP, India |

EDUCATION

Boston University, Boston, MA, USA

- MS in Artificial Intelligence - GPA 3.8 / 4.0

Sep 2020 - Jan 2022

Indian Institute of Information Technology, Una, Una, HP, India

- B.Tech. in Electronics and Communication Engineering

Jul 2016 - Aug 2020

SKILLS & TOOLS

Machine Learning

Python

Computer Vision

TensorFlow

pandas

numpy

scikit-learn

matplotlib

git

nlTK

html/css

C++

Unity

C#

LOVE2D

EXPERIENCE

Member of AI & Emerging Media Research Group - Boston University, Boston, MA

Oct 2020 - Feb 2021

- Classified images about climate change from media outlets (traditional news and Twitter) with multiple stages of convolutional neural networks (CNNs).

Deep Learning Research Intern - IIITDM Jabalpur, Jabalpur, MP, India

May 2018 - Jul 2018

- Implemented a deep generative adversarial network (GAN) for image steganography in Keras based on a PyTorch implementation from a paper titled HiDDeN (Jiren Zhu et al.). Training set consisted of 10000 images.

Community Teaching Assistant - MITx on edX, Online

Jun 2015 - Dec 2015

- Created and managed a Slack team for two iterations of introductory Python courses offered by MIT on edX (6.00.1x and 6.00.2x).
- Moderated the discussion forum and assisted peers with their queries regarding course material and coding assignments.

PROJECTS

VoteAmerica - Audience Analysis for Vote-By-Mail Text Messages

- Analyzed ~8.8 million text messages sent to voters across the US during the 2020 election cycle.
- Explored the demographics of people who were targeted, those who were reached, and voting rates in that group.

Semi-Supervised/Unsupervised methods for Hand Pose Estimation [Python]

- Explored three different semi-supervised techniques for hand pose estimation. The models explored were DeepPrior, Ladder networks, and PredNet. Posture images were from the ICVL hand posture dataset (3 GB subset).

Lung X-Ray Image Classification (Course Challenge) [Python]

- Classified X-Ray images of lungs to detect the presence of COVID-19 and pneumonia.
- Achieved 99th percentile accuracy in both binary and multi-class classification tasks.

Financial News Curation and Analysis [Python]

- Correlated media (news) sentiment about companies with stock market performance by measuring volatility, momentum RSI, exponential moving average (experiment metrics - Pearson's, Spearman's correlation, and Granger causality).
- Sentiment analysis was performed through Vader.

Multiple Object Tracking using Kalman filters [Python]

- Tracked positions and trajectories of multiple bats and multiple cells in a petri dish by utilizing Kalman filters.
- OpenCV implementation of Kalman filters was incorporated in the project.

Human Exercise Classification using Pose Estimation Models [Python, Bash]

- Developed a classifier for human exercises by means of extant pose estimation models (specifically OpenPose). Leveraged LSTM cells to gather temporal information from pose key points.

HOBBIES

Gaming

Reading/Audiobooks

Game Development

Astronomy

Meditation

LANGUAGES

ENGLISH (bilingual proficiency)

HINDI (native proficiency)