

AVANI GUPTA

Second year CSE Undergrad at IIIT-H

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EDUCATION

B.Tech (Hons.) + MS by research in Computer Science

International Institute of Information Technology

📅 May 2023

📍 Hyderabad, India

WORK EXPERIENCE

Developer

Scrapshut (Jan 2020- May 2020)

- Developed a web-app using Angular and Django for a Startup Scrapshut, where users can rate and review various websites by providing their link.
- I wrote a scraper which extracts the title, body and all the links on the page through URL.
- I trained various ML models like LSTM, XGBoost, CNN on three datasets- Kaggle fake news net, Kaggle: getting real about fake news and Kaggle fake news Prediction.
- Used pre-trained word embeddings of Glove.
- Also trained a passive aggressive classifier which is an online learning algorithm to incorporate user rated scraped reviews for real time prediction.
- Achieved good performance metrics above 93 percent and aced the challenge of making the predictions real time.

PROJECTS

Fake News Detection using Deep Learning based Natural Language Processing

Accepted as poster publication in 26th IEEE International Conference on High Performance Computing, Data and Analytics

📅 Dec 2019

📍 Hyderabad, India

Research Project under Professor N. Srinivas Naik, IIIT Naya Raipur

- Trained an artificial neural network with single hidden layer, used credit history of users sharing fake news as important feature.
- Achieved until 25% increase in accuracy than existing solutions and outperformed existing methods.

Self Driving Car (Dec 2018)

- Used Deep Q learning. Passed states of environment vectors as input to neural network. Have 3 sensors for direction and moment.

Artificial Intelligence playing Atari games (Nov 2018)

- Developed AI playing games like Breakout and Doom.
- Used Asynchronous Advantage Actor Critic (A3C) algorithm for Breakout and Deep Convolutional Q-Learning with Eligibility Trace for Doom.

Real time Driver Drowsiness detection (Apr 2018)

- Did real time tracking of eye movements of driver using cell phone camera, based on Viola Jones Algorithm and integrated with Raspberry Pi

Wikipedia Search Engine (Sep 2019)

- Supports various queries, returns ranked results from Wikipedia Corpus.

RL implementations from David Silver's Course (Dec 2019)

- Implemented all algorithms from David Silver's course, Studied Vowpal Wabbit and how it is used for RL based recommender systems

Chatbot (Jan 2019)

- Used Deep Natural Language Processing and Seq2Seq model. Trained on Cornell movie-dialogs corpus

Jetpack Joyride Terminal Game (Jan 2020)

- Made terminal game using OOPS concepts in python
- ### Fake Currency Detection System (Oct 2018)

- Decomposed image to HSV, processed important features like strip, and classified as real/fake

Face Recogniser (March 2019)

- Used Facenets and triplet loss function to compare images of different persons and identify them.

Shopping app based on MERN stack (Feb 2020)

- Shopping app having different functionalities for vendors and buyers

Genetic Algorithm for Solving the task of Optimizing weights of a model (Feb 2020)

- Worked upon choosing the best crossover, mutation type, probability of mutation etc and hyper tuning parameters to avoid pre-mature convergence and local optimum.

RELEVANT ACADEMIC COURSES

- **Academic** Information Retrieval and Extraction, Advance Data Structures, Calculus, Linear Algebra, Probability and Statistics, Algorithms, Discrete Mathematics, Data Visualization, Machine Data Learning, Computational Intelligence, Information Security, Quantum, Computer Networks
- **Non-academic training and courses** Deep Learning for NLP, ML a-z, AI a-z by SuperDataScience, David Silver's Course on RL, Deep RL Bootcamp, PyData workshot, Ethical hacking workshop at IIT-B

SKILLS

- **Programming Languages** Python, Java, C/C++, Matlab
- **Web Development** Django, ReactNative, NodeJs, CSS, Angular, Flask, HTML, JavaScript, VueJS, SQL
- **Applications** MERN stack, Git, Android Studio, Firebase
- **Environments** Linux, Windows, Arduino, Rpi

POSITIONS OF RESPONSIBILITY

- **Member** Developer Circles Facebook Community
- **Student Coordinator** Training and Placement Cell
- **Programs and Events Head** E-cell: Planned and Organised various entrepreneurial events
- **Founder and Leader** Art-Club - 'Indradhanush', IIIT Naya Raipur

ACHIEVEMENTS

- Recipient of Microsoft Mentorship through Codess 2020.
- Winner of Deep Learning quiz by IEEE, NIT Raipur
- Top teams: CodeUtsav- 28 hour Hackathon, NIT Raipur. Built a Recommender System for AI centric Retail
- Selected for Smart India Hackathon 2020, Representing college, working on Problem Statement: Smart Library Management System: proposed a automatic tagger and Recommender system