Ajeya Krishna

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Education

Indian Institute of Technology (BHU) Varanasi   *Varanasi, India.*
IDD IN ENGINEERING PHYSICS.   CURRENT C.G.P.A **8.40/10.**

Andhra Pradesh Board of Education   *Tirupai, India.*
BIEAP (CLASS 12): **972/1000.**   BSEAP (CLASS 10): **9.8/10.**

Skills

Programming Languages   C++, Python, HTML5, CSS, Javascript,Latex, SQL.

Work Experience

Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR)   *Bangalore, India.*
INTERN   *Dec - Jan 2019.*

- Worked on a **Statistical Mechanics problem using computer simulation** with Python,Jupyter Notebook under professor **Subir K Das**.
- Wrote a Scientific Model to efficiently predict the phase separation mechanism of a mixture when quenched to a low temperature using **Mean Field Approximation** of Ising Models to perform this task.
- Achieved two phase separation mechanisms Spinodal Decomposition and Nucleation and employed **Monte Carlo Algorithm** to attain better results.

Projects

Flappy Bird with Artifical Intelligence - Git   *July 2019, IIT BHU.*

- Developed an user interactive game using Pygame module from scratch using Python.
- Deployed the NEAT(NeuroEvolution of Augmenting Topologies) to generate Artificial Neural Networks. Implemented NEAT with it's default hyperparameters and with tuned hyperparameters.
- The model is trained for 50 epochs and is able to fetch good results.

Bangalore House Price Prediction and making model live using FLASK - Git   *February 2020, IIT BHU.*

- The Bangalore House Data consists of 13,000 entries with 9 different features. This data describes the attributes that values up the cost of house.
- Prepossessed the data by removing the outliers with business perspective, outliers using mean ,standard deviation, OneHot encoding for categorical entries and did Dimensionality Reduction by removing features.
- Linear Regression,Lasso and Decision Tree Regressor algorithms were used from sklearn library. Optimized the model using K-Fold Cross Validation and used GridSeachCV to find the best model.
- Developed the Front End application from scratch using HTML,CSS,Javascript. FLASK module was used to deploy Back End application.

Sentimental Analysis of IMDB reviews- Kaggle   *March 2020, IIT BHU.*

- The IMDB Dataset having 50,000 reviews classified into positive and negative was used.
- The text reviews were pre-processed by using Beautiful Soup,Porter stemmer, removing stop words, punctuation marks,special characters.
- Developed Bags of Word model and labelled the data.
- Logistic Regression,Stochastic Gradient descnet,Naive Bayes algorithms from sklearn library were used to predict the sentiment of the reviews.

Classification of Cats and Dog images using Convolutional Neural Networks   *June 2020, IIT BHU.*

- Imported data using Keras library. Built a Convolutional Neural Network with two convolution layers, pooling layer, flattening layer,full connection layer and atlast output layer using TensorFlow.
- Tuned the activation function,optimizer,learning rate,loss function,epochs,metrics of evaluation.
- Trained the model for 50 epochs and attained a 90 percent accuracy.

Other Projects   *Jan-March 2020, IIT BHU.*

- Built an Artificial Neural Networks (2 hidden layered) for classification from scratch using tensorflow to classify Credit cards. Attained 90 percent accuracy in 10,000 data entries.
- Built a XGBoost model by tuning the hyperparmeters to predict the survivability chances in Titanic using the data set from Kaggle. Attained a 80 percent accuracy.
- Built an ANN over Mammography Masses data set to predict malignant or benign. Trained for 100 epochs by tuning the hyper parameters.Attained a accuracy of 80 percent.

Relevant Courses

Computer Science   Data Analysis using Python, Machine Learning, Deep Learning, Data Structures and algorithms.
Physics   Quantum Mechanics,Statistical Mechanics,Nuclear Physics, Analog and Digital Circuits.
Mathematics   Linear Algebra, Probability and Stochastic Processes, Differential Equations, Calculus.
Management   Introduction to Industrial Management, Applied Deep Learning

Position of Responsibility

Technex Workshops Head   *IIT BHU*

- Contacted with Companies and successfully conducted 13 Workshops for 3 days.
- Lead a team of 30 students to achieve 2000+ foot count in workshops (highest across IIT's).

Miscellaneous

JEE Rank   Secured a rank of **2504** in the Joint Entrance Exam 2017(Advanced).

Fest Management   Managed a fest for 500+ foot count by executing the strategies. Provided post event analysis, budget recaps, internal and client feedback and incorporate learning into future event plans