SAI SUMANTH
Final Year B.Tech Student
Computer Science and Engineering
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OBJECTIVE

To pursue graduate studies in Computer Science and Engineering, leading to a career in research. I am interested in Deep Learning, especially applying it in the field of Computer Vision, Natural Language Processing.

ACADEMIC DETAILS

Year	Program	Institution	Percentage/GPA
2014-Present	B.Tech in Computer Science and Engineering	IIT (ISM) Dhanbad	CGPA = 8.84 (Till 6th semester)
2014	Class XII State Board	Narayana Junior College Hyderabad	97.3 %
2012	Class X State Board	Anjali High School Suryapet	GPA = 9.7

RESEARCH PROJECTS

- **Video Caption generation (Summer Internship at arya.ai)**
  In this project, CNN+LSTM model is explored in which we used pretrained VGG-19 architecture in conjunction with LSTM recurrent neural network to produce a natural language description for the video. The training of the model is done on MSR-VTT dataset.

- **New Data pipeline for Arya's VEGA workbench (Summer Internship at arya.ai)**
  Developed a new data pipeline which can accept any type of data as input like single image, multiple images, video, text etc., We used Google's protobuf, twisted server and threading concepts to build it.

- **Music Genre Classification using Multimodal learning (Implementation in Tensorflow)**
  In this project, I am working on using multimodal learning for music genre classification taking the motivation from the paper "Music genre classification using multimodal learning" by S.Kim et al.,
  In this model, Convolutional Neural Network (CNN) is used for the spectrogram image of music and Recurrent Neural Network (RNN) for sequential data of the sound. I am implementing this model in Python using Google's Tensorflow.

- **End-to-end Deep Learnt Automatic Speech Recognition Prof. Pabitra Mitra**
  ✯ Summer Internship at Indian Institute of Technology (IIT) Kharagpur (May 2016 – June 2016)
  It was built using a neural network to map acoustic input to characters, a character-level language model and beam search decoding procedure which was implemented by my team. The network was a Deep Bi-Directional Recurrent Neural Network, trained using Connectionist Temporal Classification (CTC) loss function. It directly trains a speech recognizer using errors generated by spoken language understanding tasks

- **Implementation of several problems using graphical interface Prof. P K Jana**
  (August 2015 – Dec 2015)
  Implemented problems like clustering of several data points using k-means clustering, Magic Square, Determination of position of a point based on given co-ordinates of n-sided polygon. The implementation was done using the concept of swings in JAVA.

OTHER PROJECTS (Self)

- **Attendance Retrieval from Linux terminal**
  I have written a python program using selenium webdriver which is used to retrieve attendance of a specific student from our university's student portal Management Information System (MIS) right from the Linux terminal after specifying his/her login credentials through the terminal.

- **YouTube Downloader from Linux terminal**
  I have written a python program using selenium webdriver which is used to download YouTube videos from the Linux terminal. It is written taking title of the video as input and downloading the specific video based on the search results of YouTube (the first link that appears after it is searched is considered)

- **Python Capstone Project (Coursera Python Specialization)**
  - Implemented Page Rank Algorithm
  - Retrieved and processed email data from Sakai open source project
  - Visualization of the email data retrieved and processed: a word cloud to visualize the frequency distribution and a timeline to show how the data is changing over time (used d3.js)
  - Implemented a python program which interacts with Geocoding API and retrieve latitude, longitude and google map of a given location.

- **Designed a Java Application using swings**
  Developed a Java Application using swings which interacts with the user in the form of a software application. I developed it for a coding contest in our University Technical Fest ("Concetto"). The Application consists of several logical questions and points were given using bidding strategy.

SCHOLASTIC ACHIEVEMENTS

- Qualified for Indian National Mathematical Olympiad (INMO) 2012 by clearing Regional Mathematical Olympiad (RMO)
- Ranked 91st in Unified Council National Level Science Talent Search Examination (NSTSE) 2012
- State 2nd in Ramanujan Mathematical Test in 2012
- Among Top 10% in INChO 2013
- Receiving Merit Cum Means Scholarship.

RELEVANT COURSES

- **Computer Science:** Algorithm Design and Analysis, Advanced Algorithms, Data Structures, Artificial Intelligence, Data Mining*, Database Management System, Computer Graphics, Compiler Design, Discrete Mathematics, Computer Networks, Operating Systems, Computer Organisation, Computer Architecture, Object Oriented Programming, Theory of Computation

- **Mathematics:** Graph Theory, Statistical Methods and Probability, Complex Numbers, Differential Equations, Matrix Theory

- **MOOC Courses:**
  - **CS231n Convolutional Neural Networks for Visual Recognition**
  - **CS224d Deep Learning for Natural Language Processing**
  - **Python for everybody** (5-course Specialization) by University of Michigan
    Verification Link:
    coursera.org/verify/specialization/E5LE9CYE28TU
  - **Machine Learning Specialization** (3/4 courses completed) by University of Washington
    Verification Links:
    Classification course: coursera.org/verify/36KB3N3K373J
    Regression course: coursera.org/verify/JL4C5P773X3B
    Case Study Course: coursera.org/verify/SXFEW9SBYE3Y

* to be completed in Monsoon semester