Nallagatla Manikanta

Bachelor of Technology
Electronics & Communication Engineering

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AREA(S) OF INTEREST

- Machine Learning, Image Processing

EDUCATIONAL DETAILS

Class	Year	Institution/Board	CGPA / %
Bachelor of Technology	2013 – 2017	IIT Roorkee	**9.533** *on scale of 10*
12th Grade	2012-2013	Andhra Pradesh State Board (IPE)	**98.5%**
10th Grade	2010-2011	Andhra Pradesh State Board (SSC)	**97.66%**

ACADEMIC HONORS

- **Departmental Gold Medal** among 74 students.
- Awarded Merit Cum Means Scholarship in IIT(for meritorious students of the department).
- Secured **All India Rank 1259 (Percentile: 99.9)** in the IIT-Joint Entrance Examination 2013
- Secured **All India Rank 135** in IIT-Mains Examination 2013 among **0.9 million** students.
- Secured **State wide 9th position** in 12th class among **1.0 million** students.
- Awarded Central Sector Scheme of Scholarship for securing outstanding marks in 12th class.
- Secured **State wide 3rd position** in 11th class among **1.0 million** students.
- Secured **State wide 10th position** in 10th class among **1.28 million** students
- Qualified **NTSE** (National Talent Search Examination) for **State Level**, 2010
- Secured percentile score of 99.89 in 12th class, Andhra Pradesh Board, 2013
- Secured All India Rank 108 in EAMCET, Andhra Pradesh entrance examination, 2013

JOBS

Software Development Engineer 2
Company: Adobe Systems
(July 18, 2018 – Present)

Member of Technical Staff
Company: Adobe Systems
(June 13, 2017 – July 17, 2018)

- Worked on Coresync (Sync solution), in which I took the ownership of network module (GUDE).
- Contributed to various features like resumable network transfers and GUDE for IOS.
- Worked on improving the performance of Coresync

INTERNSHIP

A Framework for creating Domain-specific Affective Topical Lexicon
Field: Natural Language Processing
(May 10, 2016 – July 15, 2016)
The objective of this project is to build a framework that can be used to build a domain specific topical affective lexicon. In this project we have applied the concepts of Psychological theory like dimensional model of affect and concepts of Natural Language Processing like Topic modeler, Dependency Parsing and Point wise mutual information to build the framework. Python is used for implementation of all the modules of the framework. Using the Topical lexicon built for Crime and World speech domains, a chat bot is built which can give suggestions in writing an article in the same domains. For validating the topical lexicon, cognitive experiments were made on Amazon Mechanical Turk. In conclusion, this framework is developed to capture the latent affects that are not captured by a general lexicon which is very useful in analyzing a domain specific content.

Under guidance of: Kokil Jaidka, Niyati Chhaya, Big Data Intelligence Lab, Adobe systems, Bangalore, India

System Development for Wireless Network Platform dedicated to the precise measurement of the transmission time of wireless packets emitted using IEEE802.11g protocol
Field: Computer Networking
(May 10, 2015 – July 20, 2015)
The objective of this project is to develop the interconnection mechanism that guarantees the measurement of transmission time of a network data sent from a Real-time wired network to a wireless node, and vice versa. In simulation, the time measurement can be made using QNAP simulator. To validate it by the experiment, the experimental platform consisted of a computer, Wi-Fi routers and a switch. Soekris Net4826 nodes are used as Wi-Fi routers, switch is used to configure them for communication. Exposure to the use of routers, switch in order to obtain required results was the broad objective of this internship. In Conclusion, to validate the results produced by QNAP simulator, system is developed to measure the transmission time mentioned.

Under guidance of: Katia Jaffres-Runser, IRIT Laboratory, INPT-ENSEEIHT, Toulouse, France

PROJECTS

Automatic License Plate Detection using graph cut [ongoing] [Github**]**
Field: Computer Vision
(May, 2018 - Present)
The objective of the project is to detect the license plate in a given image automatically. Using image processing and machine learning, working on graph cut based license plate detection using colour, smoothness and shape features. As a part of this, we are also developing a framework to learn various hyper parameters of the model to detect the license plate. Understanding the concept of Computer vision and achieve the objective was the broad objective of this project.
Under guidance of: Ganesh Ramakrishnan, Associate Professor, Computer Science Department, IIT Bombay

Key phrase based News Event Exploration Engine
Field: Data Analytics
(February, 2016 - April, 2016)
The objective of the project is to design a News Event Exploration system for exploration and enrichment of news events and concepts. Clearly, there is a need of a system, enabling readers to get a broad overview of news data generated in response of user query. In order to learn a global description of news while maintaining a fast and accurate search, we propose a key phrase based news exploration system, the system works in two phases: key phrase extraction followed by key phrase enrichment. The key phrase enrichment phase finds important and interesting data related to the key phrase, such as connected entities, emerging and active news concepts. Understanding the concept of Data Analytics was the broad objective of this project.
Under guidance of: Dhaval Patel, Assistant Professor, Computer Science Department, IIT Roorkee

Optical Character Recognition using LBP, DCT, Wavelet features [Github**]**
Field: Digital Image Processing
(February, 2016 - March, 2016)
The objective of the project is to recognise the filled text of the user in any form. OCR converts the images of handwritten or typewritten text into a machine-readable or editable format. The process of OCR has several steps-feature Image acquisition, preprocessing, segmentation, feature extraction, classification. We have applied the concept of connected components to split the characters and extracted predefined features from each character. Then these features are classified into respective characters using the Multisvm. Understanding the concept of Image processing and achieve the objective was the broad objective of this project.
Under guidance of: Electronics Section IIT Roorkee

RESEARCH PUBLICATIONS

- "BATframe: An Unsupervised Approach for Domain-sensitive Affect Detection", Kokil Jaidka, Niyati Chhaya, Manikanta Nallagatla, Rahul Wadbude and Sanket Kedia, in 18th International Conference on Computational Linguistics and Intelligent Text Processing, At Budapest, Hungary, Volume: 18 [link]
- "ME2 : Movie review Exploration Engine", Nikita Jain, Nallagatla Manikanta, Achuth Kandikuntta, Deepak Jannarapu, Tella Tarun Kumar, Dhaval in Applications of Cognitive Computing Systems and IBM Watson: 8th IBM Collaborative Academia Research Exchange [link]

SKILLS

Programming: C++, Python, Java, Octave, VHDL, MySql, Php, Node, Objective C
Languages Known: English (SRW) , Hindi (SRW) , Telugu (SRW)

RELEVANT COURSES TAKEN

- Machine Learning Basic Nanodegree [cert], Machine Learning [cert], Object oriented Programming, Data structures, Operating Systems, Data base Management, Computer Architecture and Microprocessor, Computer Networks, Economics, Banking and Finance, Ethics and Self awareness.

Online Presence

Linkedin : https://www.linkedin.com/in/nallagatla-manikanta-20593383/
Github : https://github.com/manikantanallagatla

EXTRA AND CO-CURRICULAR ACTIVITIES

- **C++, Java Bootcamp Adobe (2017)**
  Participated in C++, Java bootcamps and was awarded first prize in both the bootcamps.
- **Cognizance IIT Roorkee (2016)**
  Participated in department Cognizance event 'Spot light' and was awarded first prize.
- **Term paper (2015) [**Github**]**
  Wrote a term paper 'Reconfigurable Antenna for MIMO systems' as a course project and was awarded A+ in the course.
- **Microsoft Hackathon (2015) [**Github**]**
  Participed in 24 hours Microsoft Hackathon code.fun.do 2015 and built a Windows phone app - "Devil Smasher".
- **IEEE Special Interest Group (2014 - 2015)**
  With an aim of increasing technical culture in campus, initiated a Special Interest Group of Electrical and Electronics Engineering students with activities like reading Review Papers, Research Papers, Journal Articles, Student Seminar over various domains of EE/ECE, learning mathematical tools together etc.
- **NCC (2013 - 2014)**
  Have been cadet of National cadet Corps for one year and was awarded A+ grade. Also participated in ten days NCC camp..