

Chandu Khyathi Raghavi
Email-id : khythiraghavi@gmail.com
Mobile No.: 08985035492
Alt Mob No.: 09490797525

ACADEMIC DETAILS

Under Graduate Specialization: *B.Tech in Computer Science and MS by research in Computational Linguistics.*

Examination	Institute	Grade	Board
Graduation:	<i>IIIT Hyderabad</i>	8.5 (on a scale of 10)	
Intermediate (12 th standard)	<i>Fiitjee Junior College</i>	97.8%	Board of Intermediate Education
Schooling (10 th standard)	<i>Sanghamitra school</i>	96%	CBSE

FIELDS OF INTEREST

1. Natural Language Processing, Computational Linguistics, Machine Learning, Graphics and Visualization

MAJOR PROJECTS

1. Automatic classification of medical abstracts for Evidence Based Medicine

Summer internship for 3 months in USA (Guide: Prof. Ani Nenkova, University of Pennsylvania, United States)

- Evidence based medicine is a protocol for coalescing assorted clinical expertise and systematically searching through them for optimal evidence. The US National Library of Medicine (NLM) bibliographic database is used for Automatic classification of biomedical text into labels under exclusive set of union of PICO labels and 5 NLM categories (total of 8 classes).
- We used Support Vector Machines (SVM) and Support Vector Regression (SVR) to implement this. The disparity between segments in NLM structured abstracts (multiple sentences) and real testing data initiated an idea of choice of classifiers with 4 combinations from training and testing, on segments and sentences.
- Integrating the results of 8 One Vs Rest classifier proved better than 8 way classifier. A hierarchical classifier showed improvement of 3 classes over a base class.
- For compact yet comprehensive representation, statistically significant features are extracted by binomial and z-tests, (still on-going).
- Unstructured abstracts are used as to generate brown clusters and contextual word2vec features, with the idea of using them as trigger for similarity features respectively in the case of absence of the feature itself.

2. Question Answering in code-mixed languages

(Guide: Dr. Manoj Chinnakotla, Microsoft, Dr. Manish Shrivastava, IIIT Hyderabad) (Currently working)

- Objective :Build a Question Answering system in a code mixed language, for Hindi and English.
- This new mixture language still abides by some rules and is not a vague choice of words that are borrowed from the two languages.
- Appropriate feature selection is done and SVMs are used for Question Classification for coarse and fine graining.
- Worked on possibilities of including Wordnet and Word2Vec features to expand the scope of the words and to make our system understand the question semantically.

3. Predicting the interestingness of an article by sentiment analysis

(Guide: Prof. Vasudev Varma, IIIT Hyderabad)

- (a) Objective :Perform sentiment analysis on twitter comments to predict the interestingness of an article.
- (b) All the named entities are extracted from the articles and shortlist all the dominant entities.
- (c) Mining all the tweets related to dominant entities and perform sentiment analysis on the tweets. Can be used for suggesting articles to the users.

4. Text to Speech Conversion on Mobile Platform

(Guide: Dr Kishore Prahallad, IIIT Hyderabad)

- (a) Objective :Build a light weight Text to Speech(TTS) system with Backoff provision for unseen units of sounds.

- (b) The technique of Unit concatenative synthesis is used with the choice of best syllable as unit.
- (c) Backoff provision for unseen syllables is implemented for Telugu and Kannada.
- (d) Built an android based mobile application of the same.
- (e) A silence prediction module is built to improve the perceptibility of words.

5. Domain specific morph analyzer

(Guide: Prof. Dipthi Misra Sharma, Head of Language Technologies Research Center, IIIT Hyderabad)

- (a) Objective : Address the borrowed words and unseen words, when specific to a domain.
- (b) Plugin to develop domain specific knowledge to improve the base accuracies of morphological feature predictions.
- (c) Search through language paradigm models and predict the kinds of words possible by borrowed patterns in a language.

6. Automated Face Recognition for classroom attendance

(Guide: Prof. Anoop Namboodiri, IIIT Hyderabad)

- (a) Face recognition with PCA and LDA.
- (b) Worked initially on Yale dataset and adapted SVM classifier for face recognition.
- (c) Identified and verified faces from classroom photographs to mark their attendance.

7. Intra cunk expansion tool for English

(Guide: Prof. Dipthi Misra Sharma)

- (a) Developed a tool to mark intra chunk dependencies of words in English with their expansions.

Course Projects

1. TA Portal (Course: SSAD & Project)(Guide: Prof. Raghu Reddy)

- (a) The portal we developed is currently hosted at IIIT to process applications for Teaching assistants, recommend and select them.
- (b) A portal to accept and process Teaching Assistant applications considering their preferences along with faculty nominations and admin functionalities.

2. Built an information search and retrieval system from Wiki XML. (Course: Information Retrieval and Extraction)(Guide: Prof. Vasudev Verma)

- (a) Developed a search engine on Wiki dump of 43 GB to bring relevant documents based on bag of words representation.

3. Hand Written Digit Classification (Course: Statistical methods in AI)(Guide: Prof. Anoop Namboodiri)

- (a) Created a complete digit recognizer and tested it on the MNIST digit dataset. I have adapted the Knn method to predict the digit from the extracted features.

4. Linear classification implementation (Course: Statistical methods in AI)(Guide: Prof. Anoop Namboodiri)

- (a) Implemented perceptron algorithms to linearly classify 2-point dataset MS2CD and MNIST data subset.

5. POS tagger (Course: Natural Language Processing) (Guide: Prof. Kishore Prahallad)

- (a) Built a POS tagger for 5 languages both by statistical approach using Viterbi algorithm and by unsupervised clustering techniques.

6. Database system with querying for a hotel (Course: Database Systems) (Guide: Dr. P.K. Reddy)

- (a) Developed an application handling database queries of a hotel (Hotel Sitara, Kukatpally) with appropriate logins, room booking, salary information and permissions to various users.

7. UI for YourFount (Startup YourFount)

- (a) Design and implementation of UI for a website Your Fount with ideologies of a user getting updates, and articles of the field of interests he chooses. Personalization of articles was the aim of the project.

8. Implementation of Linux shell: (Course: Operating systems) (Guide: Dr. P.K. Reddy)

- (a) Implemented a Bash like shell for Linux platforms C/C++ for running various scripts.

POSITIONS OF RESPONSIBILITY

1. Currently working as a Teaching assistant for the course Natural Language Processing.
2. Worked as a Teaching assistant for the course Natural Language Processing and Applications.
3. Worked as a Teaching assistant for the course Structured Systems Analysis & Design.
4. Mentoring projects "Voice-enable mobile app for easy Grocery Shopping" and "Tools for Speech Data Collection".
5. Worked as a Teaching Assistant at IIIT-H for Graphics course under the instructor P.J.Narayan
6. Worked as Teaching assistant in my 3rd year under Prof. Prabhakar.
7. Sports Co-ordinator for Agni house in IIIT-H for the academic year 2013-2014.
8. Sports Vice Captain for Agni house in IIIT-H for the academic year 2014-2015.
9. Worked as Teaching Volunteer in Ashakiran, a NGO for about 2 years.

PAPERS COMMUNICATED

1. "**Answer ka type kya he? Learning to Classify Questions in Code-Mixed Language**", has been accepted at MWA 2015, which is in conjunction with the International World Wide Web Conference.
Reference: Click here for reference of the paper.
Web url: <http://www.www2015.it/documents/proceedings/companion/p853.pdf>
2. "**Domain Adaptation in Morphological Analysis**" has been published by IJLLL 2014, International Journal on Languages, Literature and Linguistics.
Reference: Click here for reference of the paper.
Web url: <http://www.ijlll.org/vol1/25-X00053.pdf>

ACADEMIC ACHIEVEMENTS

1. Selected for **S.N. Bose Scholarship award 2015** . Department of Science and Technology (DST), Govt. of India, the Indo-U.S. Science and Technology Forum (IUSSTF) and WINStep Forward have partnered to support a dynamic and transformative student exchange program between premier institutions in India and the United States), through which I was selected for an internship at University of Pennsylvania in the Summer 2015.
2. Been awarded **Best All Rounder of the Batch** at International Institute of Information Technology, Hyderabad, criteria for selection being academics, extra curricular activities and contribution to other campus activities.
3. Been awarded **Dean's List of Academic Merit Award** for five times in Monsoon 2011, Spring 2011, Monsoon 2013 and Spring 2014 and Spring 2015.
4. Been awarded **Research Award** at IIIT H in November 2015.
5. Got selected for **Indian Institute of Science (IISc) Summer School** at Department of Computer Science and Automation (CSA) in computer science for the year 2014 and attended the school winning third prize in the Assignment.
6. Awarded the **Best Outgoing Student** of our batch in School by considering all facets of student life.
7. Selected in **Catch Them Young Program** by INFOSYS, to initiate school children into Information Technology at the High school level.
8. Been awarded **National Merit Certificate** for 2 subjects in 10th standard, under the curriculum Central Board of Secondary Education.

TECHNICAL SKILLS

1. C, Python, Bash Shell, Perl, javascript, MySQL,OpenGL

INTERESTS AND HOBBIES

1. Sports: **Best Sportswoman of the Year** for continuously 3 academic years 2011-2012, 2012-2013 and 2013-2014.
2. National level athlete at CBSE cluster meets.
3. Essay writing: Awarded first prize in **Rajiv Gandhi Akshay Urja Divas, 2006** by Ministry non-conventional energy sources, Government of India.
4. Social work and Crafts during summer camps: **Social internship** at Panchgani(awareness program on the uses of computer, primarily to school children), interacting with people about crafts and education projects going on there. Been a part of the team that initialized a new crafts project for unemployed women.