Samriddhi Sinha

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Last Updated on 22nd October 2018

EDUCATION

IIT KHARAGPUR
BTech: Civil Engineering, 2019
Cum. GPA: 7.19

DELHI PUBLIC SCHOOL RUBY PARK
Grad. May 2014 | Kolkata, India

PROJECTS

AUTOMATIC CONCEPT MAP EXTRACTION |
Graduation Project
July 2018 - Present | IIT Kharagpur
Automatic Concept Map Generation applies the concepts of Natural Language Processing and optical character recognition in the intersection of the fields of Information Retrieval and Document Summarization. The objectives of the project is to create a pipeline that is capable of:

- Extract text from a large collection of documents presented in Portable Document For- mat(PDF) in a reliably, and in a manner that is easily reproducible to a large number of books.
- Extract Important Concepts and Sub-Concepts from the text and link them together with the help of short textual summaries.
- Represent the concept map visually in an efective and easy to consume manner.

COMPETITIVE STRENGTH PREDICTIONS OF ATM VENDORS IN CALIFORNIA
| Silver Technology General Championships
Jan 2017 | IIT Kharagpur

- Part of a 15 member team to analyse the competitive strength of three major ATM vendors from the demographic data of California.
- Scraped data from http://www.unitedstateszipcodes.org/ for demographic data based on PIN codes
- Visualised feature importance with Tableau and clustered ATM locations based on K-Means approach
- Combined per county demographic model with per state demographic model to generate final revenue generation of ATM Location.

MENTORSHIP

KHARAGPUR WINTER OF CODE
December, 2017, IIT Kharagpur
Kharagpur Winter Of Code is an open source competition under Kharagpur Open Source Society in December to help introduce beginners to the world of Open Source.

GIRLSCRIPT SUMMER OF CODE
2018
Girlscript Summer Of Code is a 3-month long open source project under Girlscript India to help introduce beginners to the world of Open Source.

STUDENT WELFARE PROGRAM
2017-19, IIT Kharagpur
Acted as a mentor to seven freshers throughout their freshman and sophomore years.

SKILLS

Languages
Python • R • Matlab • C/C++ • CSS • JavaScript
Packages, Libraries and Tools
scikit-learn • scipy • numpy • matplotlib • pandas • keras • tensorflow • NLTK • CUDA • Flask • Travis/Jenkins CI • Git • SQL

INTERNSHIPS

GOOGLE SUMMER OF CODE
| Student Software Developer
May-September, 2017

- Developed a natural language processing toolkit in Python for dealing with Indian languages under the mentorship of Portland State University.
- Worked with Hindi, the third most spoken language in the world keeping Bengali (another Indian language) as a future deliverable.
- Engineered models for basic NLP functionalities like tokenization, gender tagging, lemmatization and POS tagging. Used the Hindi Dependency Treebank for the tagset, and the Wikimedia dumps for creating a sizeable vocabulary.
- Created a model based on Recurrent Neural Network with LSTM units for Part of Speech tagging that utilized word embeddings as features.

FRACTAL ANALYTICS
| Natural Language Processing Intern
May 2018 – July 2018 | Mumbai, India

- Worked as a Natural Language Processing intern with Cuddle.ai. Cuddle.ai puts an AI-powered personal analyst in the hand of the user, delivering mission-critical business insight in a timely manner.
- Developed a BiLSTM based Artificial Named Entity Classifier (ANEC) aimed at restricted business domain systems. The ANEC outperformed a previously established Stanford Constituency Parser based NER in terms of both accuracy as well as search time.

FREELANCE EXPERIENCE

PROLOGIC FRIST
| Natural Language Processing Consultant
Dec 2017 – Jan 2018

- Project is based on building a speech based AI-Assistant aimed at the Hospitality industry. The AI Assistant is to be programmed to extract structured information from service requests, feedback and orders from intelligent dialogue with the end user.
- Voice captured from devices like Amazon's Alexa, Google Home is first processed and sent into an NLP interface. The interface extracts entities from the text, and captures other intricacies like intent and sentiment. Once it understands the user's query, request or order, it generates an intelligent reply for the end user using Natural Language Generation to either confirm its understanding of the user's command or to interpret any missing entities which are vital for the complete understanding of the user's command.

AWAIRE
| Machine Learning Engineer
Dec 2017 – Jan 2018

- Project based on using High Performance Computing Machines to perform classification on captured heart data in an attempt to detect abnormal heart sound, heart valvular disease, and even predict possible signs of congestive heart failures.
- Applied signal processing techniques for extracting features from heart sound and then using deep learning models for classification of extracted data.

POSITIONS OF RESPONSIBILITY

TECHNOLOGY STUDENT'S GYMKHANA
| Technology Coordinator
July, 2017 – Present | IIT Kharagpur
Entrusted with the responsibility of handling the web interfaces under the TSG. Currently engaged in creating a website for the Gymkhana which handles the extra-academic activities of an institute of more than 10,000 students.

ACM-ICPC 2017 ASIA KHARAGPUR REGIONAL
| Organizing Team Head
September, 2017 - December, 2017 | IIT Kharagpur
Responsible for coordinating and managing all the logistics and ensuring a smooth workflow for the regionals of ACM ICPC, the largest competitive programming contest in the world.