

Arka Talukdar

Junior Computer Science | BITS Pilani, Pilani Campus, India

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RESEARCH

Web Intelligence & Social Computing Lab, Dept of CS & IS, BITS Pilani — Undergraduate Researcher

May 2017 - Present

- Worked on Sentiment Analysis of tweets in Indian languages using word-embeddings and LSTM based RNN architecture on SAIL 2015 dataset.
- Working on Crisis Tweet classification with respect to 2015 Nepal Earthquake. The task involves identification of tweets that request help and those that provide aid. The goal is to match the tweets using NLP.

Biomedical Informatics Center, NICED-ICMR, Kolkata — Summer Intern

Summer 2016

- Developed a classifier to identify Adhesin proteins from FASTA sequence. Used supervised machine learning algorithms.
- Adhesin proteins are used in vaccines and their identification through statistical method shortens the time required to develop vaccines.
- Developed web server using Django that makes the classifier accessible to the bioinformatics community.

EXPERIENCE

Amber Warehouse, Pilani — Startup Co-Founder

March 2017 - Present

- Amber aims to reduce the huge loss of grains due to pests in Indian warehouses and improve the management of grains using wireless sensors.
- Developed the entire web-server that collects the data from sensors connected via WiFi. Used d3.js to create data visualizations for clients.
- Presently working on the time series data collected from prototypes in Food Corporation of India (FCI) godowns.

West Bengal State E-Governance Mission, WEBEL, Kolkata — Intern

Summer 2017

- Worked on Government Process Reengineering (GPR) in the

EDUCATION

Birla Institute of Technology and Science, Pilani — B.E.(hons) Computer Science

August 2015 - Present

Current CGPA: 8.48

Birla High School, Kolkata — AISSCE (XII Standard exam)

May 2013 - April 2015

English + PCMB, 2015
Score: 94% Aggregate

Frank Anthony Public School School, Kolkata — ICSE (X Standard exam)

May 2001 - April 2013

Score: 94% Aggregate

SKILLS

PROGRAMMING

Java • Python • Shell
Django • TensorFlow
Keras • C • Assembly(x86)

Familiar:

Jekyll • Android • MySQL • Rails
JavaScript • Matlab • CSS
MaterializeCSS • d3.js

AWARDS

National Talent Search Exam

NCERT, MHRD, Govt of India

May 2011

Score: 153/200

Awarded NTSE scholarship and secured an All India Rank of 294

processes of Calcutta High Court. It included digitizing and simplifying the process of nearly 80 departments of the High Court.

- Sentiment analysis of tweets and comments (in the app store) about government apps and public perception about each application over time and how updates affect them.

PROJECTS

Arrhythmia Detection From ECG signals — Under Dr. Rajarshi Gupta, Calcutta University, July 2017 - present

Created Neural Network based classifier to identify and identify and classify arrhythmia from ECG using MIT-BIH Arrhythmia Database - PhysioNet. Work is still in progress and it is to be further extended and fine tuned before publication. LSTM architecture was used in this classifier.

Concurrent Data Structures— Under Prof S. Balasubramanian, BITS Pilani, August 2017 - present

Analysis and optimisation of concurrent algorithms as a semester long project under Prof Balasubramanian. Till date have implemented bloom filters, priority queues and skip list and improved their scalability.

MNIST in Python—Under Dr Yashvardhan Sharma, WISOC Lab, March 2017

Created a library using Numpy that implemented all basic deep learning functionality in python. Used this library to to perform classification task on the popular MNIST dataset for recognition of handwritten digits. <https://github.com/atalukdar/MNISTinPython>

Nearest Available Hospital Locator Application — Apogee 2016 Application

Developed an Android Platform based Application that provides the user with the nearest hospitals from his/her location that have the required medical facilities available at that moment. Hospitals will update their database of the different types of beds available and availability of other medical facilities (e.g.: ventilators, operation theatres, etc) real-time. This application would provide the user with the necessary information. It was supported by backend in Django framework.

Checkmate 2016 — Web Based Game, August 2016

Developed the event - Checkmate; it is a revolutionary quizzing event to test participant's aptitude for analytical thinking and logic based problem solving. It is hosted on a web based platform.

Theme - Pokemon

<https://github.com/atalukdar/checkmateLeaderBoard>
<https://github.com/jbnerd/Pokemon-Checkmate-2016>

Kishore Vaigyanik Protsahan Yojana (KVPY)

Department of Science and Technology (DST), Govt of India
February 2014

Secured an All India Rank of 457 in KVPY among 0.1 million candidates

National Standard Exam in Chemistry (NSEC)

Homi Bhabha Centre For Science Education
September 2014

Qualified for INChO by ranking within top 300 in All India merit list.

COURSES

UNDERGRADUATE

Information Retrieval
Operating Systems
Data Mining
Data Structures and Algorithms
Database Systems
Object Oriented Programming
Digital Design

MOOC

Machine Learning (Coursera)
Neural Networks (Udacity)
Deep Learning in NLP (Stanford)
Deep Learning in Computer Vision (Stanford)

ORGANIZATIONS

BITS ACM, Student Chapter Secretary, 2015 - Present

Awarded Best Student Chapter in India for four years in a row

BITS-MUN

Member,
2015 - 2016

Center For Entrepreneurial Leadership, BITS Pilani

Member,
2015 - 2016