ATIREK KUMAR

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EXPERIENCE

Research Intern   December 2020 – Present
Data Science and Analytics Center   IIIT Hyderabad

- Enabled querying by COVID test method on IIITH COVID Research Papers Data Warehouse (ICDW) and developed a schema for the same.
- Used NLP and medical APIs for detection of drug-related keywords.

Software Engineering Intern   May 2019 – July 2019
Virtual Labs, IIIT Hyderabad   IIIT Hyderabad

- Developed a ReactJS library which allows users to directly import interactive data structures and algorithms in their experiments.
- Worked as a team for documentation, integration and deciding architecture.

Software Engineering Intern   Aug 2018 – Nov 2018
Descign | descign.com   CIE, IIIT Hyderabad

- Worked on a PDF renderer, supporting annotation for reproducing research.

Computational Science Research   May 2019 – Present
CCNSB, IIIT-H | ccnsb.iiit.ac.in   IIIT Hyderabad

- Working as a research student under Professor Subhadip Mitra (link to bio) in the field of computational particle physics, on simulating leptoquark scenarios to get exclusion limits on LHC data.

Intern   December 2018 – December 2018
Frejun | frejun.com   CIE, IIIT Hyderabad

- Set up Google Analytics and associated services on the company's website.

PROJECTS

Twitter sentiment analysis | Python, SKLearn, TextBlob ,Pandas
Perform sentiment analysis on bitcoin-related tweets using Textblob and text classification using Naive Bayes & NLTK. Perform time series analysis using SVM, CNN & RNN.

Digital Face MakeUp | Python, numpy, dlib, opencv
Implementation of a paper that provides an innovative approach of creating face makeup upon a face image with another image as a style example using dlib and opencv-python.

Earthquake Data Analysis | Python, Pandas, numpy, matplotlib, sklearn
Performed data cleaning, and built a classifier for predicting earthquakes in a geographical region using KNN and decision trees.

Clustering Project | Python, Pandas, numpy, matplotlib, sklearn
Performed data cleaning, PCA, data visualisation, K-means, hierarchical & DBSCAN clustering on a data set of over 18K football players.

Wikipedia Search Engine | Python, NLTK, XML
Creates a posting list for a 42 GB wiki dump using SAX parser. Performs search using tf-idf with support for Wikipedia field queries.

Expense tracker | Python, Flask, Sqlite3
An expense tracking web application which supports login via One Time Password using SMTP and various other features such as group expense tracking.

OS-Shell | C
A custom shell coded in C using system calls to implement standard terminal commands. Supports piping, redirection, foreground and background processes.

Quiz Portal | ReactJS, Golang
A web-based quiz portal having functionality for admin and users.

EDUCATION

B.Tech in Computer Science (MS by Research)
Apr 2017 – May 2022

IIIT Hyderabad

Secondary level Education - ICSE
2013 – 2017

City Montessori School, Lucknow

Qualified NTSE(National Talent Search Examination) conducted by NCERT in 2015
Class 10 boards percentage – 96%

SKILLS

- **Programming** C/C++ STL, Python, Java
- **Python** Numpy, MatPlotlib, Selenium, Pandas, NLTK, sklearn
- **Graphics** OpenGL, WebGL, PyGame
- **Front End** Javascript, ReactJS, Jquery, HTML5/CSS, Bootstrap
- **Back End** Go, Django, Flask
- **Database** MySQL, Neo4j, Sqlite3
- **Misc.** Git, Bash, Latex, Linux, OS X

COURSEWORK

Software Engineering   Operating Systems
Structured System Analysis and Design
Data Structures   IT Workshop I,II
Algorithms   Introduction to Databases
Data Analytics   Statistical Methods in AI
Information Retrieval and Extraction
Optimization Methods   Formal Methods
Graphics   Distributed Systems
Principles of Information Security
Computer System Organisation

POSITIONS

- **Entrepreneurship Cell, IIIT Hyderabad**
  Social Media and PR Head   (2018-19)
  Content Writing Head   (2018-20)
  Collaborations Head   (2019-20)
- **Felicity(College Fest of IIIT Hyderabad)**
  Events coordinator   (2019-20)
- **Organizer: Megathon(2018,2019)**
  E-Cell IIIT Hyderabad's annual 24-hour long hackathon with 400+ students participating
- **Organizer: Felicity 2020**
  3-day long IIIT Hyderabad's annual techno-cultural fest with a participation of over 3000+ students
- **Ping (college magazine)**
  Writer   (2017-18)