# **Archit Kumar**

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# **SKILLS**

#### **Programming Languages**

C/C++ , Python , HTML , CSS , Javascript

#### **Others**

Machine Learning, System Design , MySQL , Linux

#### Soft Skills

Problem Solving , Critical Thinking , Project Management , Creativity .

## Languages

English - Professional Proficiency , Hindi - Native or Bilingual Proficiency

# **KAGGLE**

IEEE-CIS FRAUD DETECTION

rank - top 21%

**GENERATIVE IMAGES** 

rank - top 18%

# **INTERESTS**

Machine Learning , System Design , Data Science , Deep Learning

# **ACHIEVEMENTS**

Air 260 - GATE CSE 2018

# **EDUCATION**

# **MTech in Computer Science**

International Institute of Information technology, Hyderabad

07/2018 - Present

CGPA - 8.23

Courses

- Database systems
- statical method in artificial Intelligence
- Scripting and computer environment
- Operating system
- Information Retrival and Extraction
- Computer vision

# BTech in Electronics and Comm. Engineering Bundelkhand Institute of Engineering and Technology

07/2014 - 05/2018 Percentage - 77.75%

## **PROJECTS**

### Wiki Search Engine (08/2019 - 09/2019)

- □ The project aimed to implement a text based search engine on 70 GB of Wikipedia dump.
- We implemented an inverted index (sorted by tf-idf score) based search engine. Which resulted in ~8GB size of invered index and achieved average searching time of 500 milliseconds.
- Key Concept: Infromation retrival, SAX Parser, Stemming, Python, WikiPedia dump, Inverted Indexing.

# Recognition of Handwritten Words and Lines using a CNN-LSTM Network (03/2019 - 04/2019) ☑

- The Project aimed to implement a neural network architecture to detect handwritten words for IAM dataset.
- Experimented different augmentation techniques (ex: Affine transformations) for image generations. Augmentation was performed to make neural network invariant to the changes in individual handwriting but highly variant for the handwriting of two different people.
- Key Concept: CNN-LSTM neural network, CTC loss, Augmentation.

#### Http Server in cpp using thread pool (10/2018 - 11/2108) ☑

- □ The project aimed to implement the core features of http server ( get and head methods ) in c++ using pthreads library.
- We Implemented a multithreaded scalable server and presented different analysis of the performance of the server for thread counts, cpu cores, numbers of tasks.
- ${\color{red} \bullet} \ \ \, \text{Key Concept: Threadpool , Threads Synchronization , C++ , Pthread Library , Socket Programming .} \\$

#### SemEval19: OffensEval (09/2019 - Present)

- The project is multiclass hierarchical in nature classification. Classification categories includes Offensive language identification, Automatic categorization of offense types and Offense target identification.
- Experimented with various classification algorithms. Analysed performance of different model for different input text (tweets) representation like bag of words, tf-idf.
- Key Concept: Hierarchical multiclass classification, Text representations (Bag of Words, TF-IDF), Python, Char-CNN neural network, Feature Engineering,

#### Malicious web pages detection (03/2019 - 04/2019) ☑

- Malicious URL Detection using Machine Learning: Malicious URL, a.k.a. malicious website is a common and serious threat to cybersecurity. Malicious URLs host unsolicited content (spam, phishing, drive-by exploits, etc.) and lure unsuspecting users to become victims of scams (monetary loss, theft of private information, and malware installation).
- We extracted and searched different features (ex: URL length, DNS response time, etc.) from a given URL and experimented with various machine learning algorithm that could categorize benign and malicious web pages separately.
- Key Concept: Feature Engineering, Honey Pots, Selenium Browser, Javascript Parsing, Python, Precision/Recall