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Amit Kumar

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| --- | --- | --- | --- |
| **Education** |  |  |  |
| *B. Tech Computer Science* | *2019-2023* | *VIT Vellore* | *8.34 CGPA* |
| *CBSE Class 12th* | *2018* | *Jeewan Public School, Motihari* | *88.6%* |
| *CBSE Class 10th* | *2016* | *HS DAV Public School* | *10.0 CGPA* |
| **Experience** | | | |

**Amazon | Software Development Intern in Orchestration Team Jan 2023 – 23th June 2023**

* Developed solution for visibility for set of operations at Tier-1 platform Team responsible for orchestrating 60B+ workflows.
* Designed **LLD** and implemented infrastructure as code for different **AWS services** involved through CDK in Typescript.
* Constructed end to end Java Package for **AWS Lambda**, integrated it with CDK package and deployed for all relevant regions.
* Ensured reliability and functionality of the lambda package through proper unit testing before deployment in production.
* Improved team’s ability to mitigate issues promptly, responsible for reduced turnaround time from 1 hour to 10 minutes.

**Createbytes | Software Development Intern 15th July 2022 – 28th Nov 2022**

* Implemented Machine Learning models for detection and classification of 7 types of skin diseases and anomalies.
* Enhanced quality of data using 68 pre-defined face landmark points by cropping area of interests from face images.
* Increased performance of classification model by Cross-validation & Hyperparameter tuning. Deployed model in production.

**Sarvh (Startup) | Machine Learning Intern 28th Sep 2021 – 28th Oct 2021**

* Worked on virtual try-on network to make online shopping experience better resulting in 30% better webpage visit.
* Increased quality of data for training by performing pre-processing techniques including background removal, edge detection.
* Implemented GAN to synthesize virtual image of the person in clothes to increase user’s interest for shopping.

**Projects**

**IMDB Movie Review Sentiment Analysis** [**(link)**](https://github.com/Amdev-5/IMDB-Movie-Sentiment-Analysis-using-BERT) **| Tech Stack: Python, ktrain**

* Implemented classification model on IMDB Movie Review Dataset to predict user sentiment.
* Built and trained BERT as base classifier model for prediction along with finding Optimal Learning Rate using ktrain library.

**Movie Recommender Systems** [**(link)**](https://github.com/Amdev-5/Recommender-System-using-Collaborative-Filtering) **| Tech Stack: Python, pandas**

* Implemented movie recommender system using item-to-item collaborative Filtering with an impressive accuracy of over 90%.
* Leveraged Pearson correlation to accurately predict movies with high similarity index based on rating vectors.

**Sentence Extraction using TextRank Algorithm** [**(link)**](https://github.com/Amdev-5/Sentence-Extraction-using-Text-Rank-Algorithm) **| Tech Stack: Python, nltk , re, Numpy**

* Implemented a sentence extraction system using TextRank Algorithm by leveraging parts-of-speech (POS) tagging.
* Orchestrated the preprocessing of text data and extracted most informative sentences to generate succinct summaries.

**Named Entity Recognition (NER) using BILSTM** [**(link)**](https://github.com/Amdev-5/NER-with-BILSTM) **| Tech Stack: Python, Keras, Pandas.**

* Developed a NER system using a BILSTM model, for identifying named entities within unstructured data.

**Image Classification of Food Dataset** [**(link)**](https://github.com/Amdev-5/Image-Classification-using-CNN-with-Tensorflow) **| Tech Stack: Python, TensorFlow, Keras**

* Built a CNN model using TensorFlow to classify images of food dataset having two classes.
* Resolved overfitting in model by using more hidden layers and Augmentation of Dataset resulting in accuracy of 88 percent.

**Technical Skills**

* **Programming Languages:** C/C++, Python, Java, Typescript, SQL, HTML | Beginner: R, JavaScript
* **Tools:** Jupyter Notebook, VS Code, IntelliJ, Google Collab, Git, CI/CD, AWS, Amazon Coral Model, Brazil-Build
* **Libraries/Frameworks:** CDK, Keras, Numpy, Pandas, OpenCV, NodeJS, TensorFlow, Spacy
* **Operating Systems:** Windows, Ubuntu/Linux • **Databases**: MYSQL, DynamoDB
* **Course Work:** Machine Learning, Data Structures and Algorithm, Software Engineering, OS, OOP, DBMS, NLP

**Achievements**

* **Leetcode: (1646)**

Achieved **Rating 1646** after solving more than **550 Algorithmic problems.**

Acquired 100 days badge for 2022 and monthly challenge badge in June and July.

* **Unconference’21**

**Winner** of UNCONFERENCE’21 conducted by ECELL, IIT Madras for strategizing supply chain model.

Collaborated with team and reduced mediators involved wisely between farmers and consumers to ensure profitable deals.

* **Plandemic’21**

**Finalist** in PLANDEMIC’21 an ideation conducted by ECELL, IIT MADRAS.

Analysed effects of COVID-19 PANDEMIC on STARBUCKS and proposed a phase wise campaign for market, sales, income.

**Publications**

**[1] Khoria, V., Kumar, A., Roy, S.S. (2022). Leukaemia Classification Using Machine Learning and Genomics. In: Roy, S.S., Taguchi, YH. (eds) Handbook of Machine Learning Applications for Genomics. Studies in Big Data, vol 103. Springer, Singapore.** [**https://link.springer.com/chapter/10.1007/978-981-16-9158-4\_6**](https://link.springer.com/chapter/10.1007/978-981-16-9158-4_6)



**Declaration**

I hereby declare that the details furnished above are true and correct to the best of my knowledge and belief**.**