

Sunil Dhaka

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EDUCATION

Indian Institute of Technology

MS in Mathematics & Scientific Computing; Minor in Machine Learning, CSE

Kanpur, UP, India

Aug 2021 – Apr 2023

Indian Institute of Technology

BS in Mathematics & Scientific Computing

Kanpur, UP, India

Aug 2017 – Jun 2021

EXPERIENCE

Data Scientist

ZEE Entertainment

Jun 2023 – Apr 2024

Bangalore, India

- Engineered **India's first** large music model with **3.3B parameters**, trained on diverse 5.3K+ hrs of music data
- Utilized deep learning to develop a robust architecture with 50+ **instrument specialized Nano models**
- Integrated all **deployments into the MLOps pipeline** to ensure operational efficiency and compatibility
- Implemented **end-to-end data collection and training pipelines** for **SFX model** to generate foley sound
- Reserached on our noval AI arranger model** to compose harmonical music from solo instruments tracks

Summer Research Intern

Indian Institute of Technology

Mar. 2022 – Jun 2022

Kanpur, UP, India

- Researched on **recommendation algorithms**, user-item based collaborative filtering and content-based methods
- Implemented **hybrid of CF and CB** using stacking and blending ensemble techniques in pytorch
- Collaborated with cross-functional teams to **integrate recommendation engines** into **educational platform** of SATHEE. Conducted **A/B testing** to **evaluate the effectiveness** of different recommendation strategies

PROJECTS

Relevant Information Retrieval from Text Documents | *Python, Pytorch, HuggingFace, Transformers* Apr 2022

- Implemented and fine-tuned text summarization algos like **TextRank, LSA, Google PEGASUS, t5**

IITK Resources Downloader | *Python, Requests, Bash, PDFkit, APIs*

May 2020

- Created a **command line utility tool to automate** the downloading of resources files from the hello iitk portal

Racial Disparity in COVID-19 Vaccination in US | *Python, Pytorch, Geopandas, XGBoost, Pandas*

Nov 2021

- Analysed vaccination rates for covid-19 by race in US counties using **MLR, SVM, Random Forest**

NYT Bestseller Flask Web Application | *Python, Flask, Bootstrap, Jinja3, Bash, APIs*

Nov 2021

- Developed **dynamic Flask webapp** for NYT best sellers list, using APIs to fetch reviews by author, title, ISBN

Modelling and Forecasting of Time Series Data | *Python, Pytorch, statsmodels, scikit-learn*

Nov 2020

- Modeled a **seasonal ARIMA model** to forecast temperatures, optimized hyper parameters with **Box Jenkins**

TECHNICAL SKILLS

Languages: Python, C, R, SQL, Bash/Shell JavaScript, HTML/CSS

MLOPs: Azure, GCP, Kubernetes, Docker, AWS, Cloud Shells, HuggingFace

Libraries: Pytorch, Tensorflow, Keras, FastAI, NLTK, Librosa/PyAudio, Langchain, OpenAI

Utilities: Git, Vim, LATEX, MySQL WB, Azure ML Studio, Vertex-AI(GCP)

ACHIEVEMENTS

Azure AI Engineer Associate | *Microsoft*

Feb 2024 – Present

Awarded, Higher Education INSPIRE Scholarship | *IIT Kanpur*

Aug 2017 – Jun 2022

EXTRA CURRICULAR

Unnat Bharat Abhiyan, IITK | *Student Coordinator, and Organizer*

Apr 2022 – May 2023

- Volunteered as tutor, created educational website, facilitated sessions to improve underprivileged children learning

Women Cell and Association | *IIT Kanpur*

Mar 2022 & Mar 2023

- Led team in organizing campus-level track & field competitions, showcasing leadership and teamwork skills