# Vishal Mittal

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## **EDUCATION**

## Birla Institute of Technology and Science (BITS Pilani)

Bachelor of Engineering (Hons.) Computer Science (CGPA: 9.30/10)

Pilani, Rajasthan June '17 - May '21

## **EXPERIENCE**

Goldman SachsBengaluru, IndiaTech AssociateJuly '21 - Present

Alert Management CoPilot

- Building a CoPilot for alert management and clustering using LLMs for production support
- Improving the software developer efficiency for low-code tools for automated alert resolution

## Upstream Delay Analysis

- Built a tool to identify upstream jobs (amongst 100s of thousands) responsible for delay of business-critical milestone
- Root-cause analysis of delay in a distributed job scheduler with 20 million+ jobs
- Reduced the time and manual effort spent (from days to seconds in diagnostics and resolution for root-cause analysis
- Awarded Goldman Sachs Engineering Tenet Award (H1-2023) in Lead with Data category

#### ML-based Anomaly Detection and Forecasting

- Designed ML models in the domain of real-time anomaly detection using statistical thresholds and time-series forecasting
- Automatic flagging and root causing of critical deliverables using time-series forecasting and xgboost

NutanixBengaluru, IndiaIntern, Member of Technical StaffJan '21 - Jun '21

- Developed a database of server nodes and their command outputs to enhance developer productivity.
- Mocked hardware output on various commands eliminating the need for procuring expensive hardware for testing
- Automated the comparison and analysis of hardware data collected by different tools in the hardware abstraction library

Goldman SachsBengaluru, IndiaSummer AnalystMay '20 - Jul '20

• Built a model to predict real-time anomaly in time-series data to predict database unavailability ahead of time using LSTM

## **PROJECTS**

## Chapter-level summaries of bestselling books using LLMs | GitHub | HackerNews

Apr '24 - Jul '24

- Collaborated on a project to automate the generation of summaries for 150+ books available in PDF and EPUB formats.
- Automatic Text Extraction: Extract text using PDFMiner for PDF files and BeautifulSoup for EPUB files
- Divided the content into manageable sections or chapters, and used LLMs via an API to generate both detailed and concise summaries

## Compiler Construction | C | GitHub

Jan '20 - Apr '20

- Implemented a compiler for a custom language in C
- Implemented lexical analyzer, syntax analyzer, semantic analyzer, and Code generator modules

## **HACKATHONS**

#### Winner - Goldman Sachs Global Engineering Hackathon - Earn Money category

May '24

- Collaborated with a 11-member cross-divisional team to develop a optimal portfolio recommendation tool
- $\bullet \ {\it Suggested investment allocation by identifying similarities across \, macroeconomic \, scenarios}\\$
- $\bullet$  Automated the process of news analysis and summarization using LLMs
- Optimized parallel processing using **MapReduce** to create weekly and monthly summaries emphasizing significant economic trends and development

## Runners up - Goldman Sachs Intern Coding Contest

July '20

## SKILLS

- Programming: Python, C/C++, SQL, Java
- DevOps: AWS, Terraform, Docker, Git, Gitlab CI/CD, Hadoop

# **PUBLICATION**

• Kumar N., **Mittal V.**, Sharma Y. (2021) "A Three-Fold Machine Learning Approach for Detection of COVID-19 from Audio Data". ICCSA 2021. Lecture Notes in Computer Science, vol 12951. Springer, Cham. Paper Link

## LEADERSHIP AND HONORS

• Mentored **5** women students from low-income communities who are pursuing undergraduate degrees across India by providing them virtual mentorship through Goldman Sachs Catalyst program

May '24 - Dec '24

grees across India by providing them virtual mentorship through Goldman Sachs Catalyst pro • Served on the **judging panel** for BITS Pilani campus hiring, representing Goldman Sachs

Sept '24

• Awarded Merit Scholarship (Top 2% out of 1000 students) at BITS Pilani

Jun'17 - May'21