Department of Computer Engineering with specialization in Data Engineering

Data Is Plural

"A data scientist is that unique blend of skills that can both unlock the insights of data and tell a fantastic story via the data."
--Dhanurjay Patil

Created By Khushal & Dhruvi

"You Can Have Data Without Information But You Can't Have Information Without Data"
--Daniel Keys Moran

SEPTEMBER NEWSLETTER

2021
VOLUME 1

Contact Us databuzz21@gmail.com

Vidya Vikas Education Trust's
Universal College of Engineering
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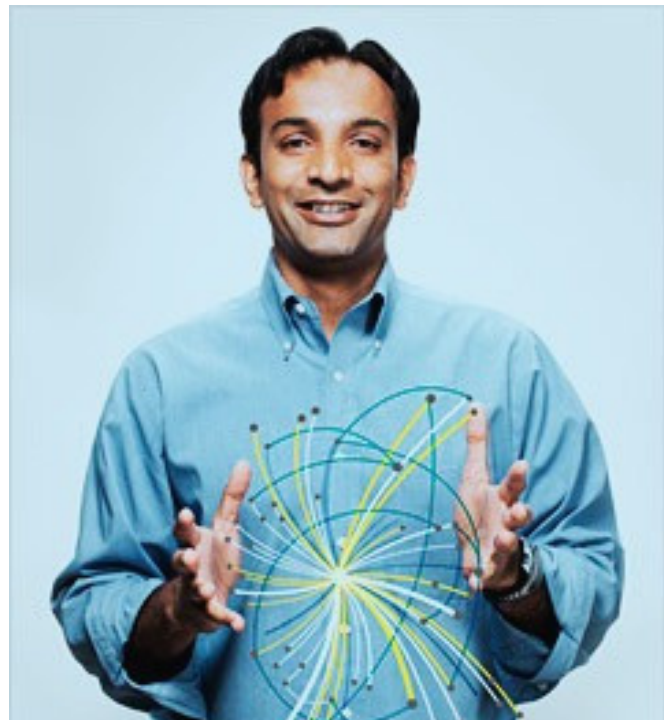(Permanently Unaided | Approved by AICTE, DTE & Affiliated to University of Mumbai)
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VISION

To build a learning and research environment in the field of Data Engineering that promotes learning towards betterment of the society.

AREA OF STUDY IN DATA ENGINEERING

- *Introduction to Data Engineering*
- *Basic Language Requirement: Python*
- *Solid Knowledge of Operating Systems*
- *In-Depth Database Knowledge — SQL and NoSQL*
- *Data Warehousing — Hadoop, MapReduce, HIVE, PIG, Apache Spark, Kafka*
- *Basic Machine Learning Familiarity*

Mission

To provide an academic environment for the development of profession in the field of Data Engineering.

To educate students in technology competencies by providing professionally committed faculty and staff.

To inculcate ethical values and leadership abilities in the students to work towards the progress of the society.

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MESSAGE FROM OUR LEADER

Campus Director
DR.JITENDRA.B.PATIL

Dear Students, Staff, and all stakeholders, we have started with emerging branches at UCOE namely Artificial intelligence and Machine Learning and Data Engineering from AY 2020-21. AI & ML and DE are wide-ranging branches of computer science concerned with building smart machines capable of performing tasks that typically require human intelligence. The field of artificial intelligence has been an interdisciplinary endeavor, requiring deep knowledge of both computational and human sciences. Machine learning is an application of artificial intelligence (AI) that provides systems the ability to automatically learn and improve from experience without being explicitly programmed. Machine learning focuses on the development of computer programs that can access data and use it learn for themselves.

We are in second year of these branches and launching their first edition of monthly newsletter. Our firm conviction about education that, we are not just teaching our students but are providing them with a career; highly competent professional career and at the same time how to be wholesome individuals to make them contribute their best in the service of our nation and the world, is getting thoroughly fortified as time passes. This, by no means, is as easy as said, but we have accepted this challenge at the very start of the institution and encouraged with the success, are determined to carry forward with it, enthusiastically, into the future. We continue to and shall always continue to treat our student community as our valuable stakeholders and we do not aim at mere stakeholder satisfaction but have been taking it far beyond to approximate the pinnacle of students Delight.

Our intensive commitment and dedication to our "Vision" and "Mission" statements and thoroughly effective steps taken to achieve them with your cooperation, involvement and Support are the main factors that led to achieving the above results and on this occasion of newsletter launch, I take this opportunity to thank you and request you to extend the same in the future as well.

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MESSAGE FROM OUR LEADER

Head of Department
DR.EKTA UPADHYAY

Data Science is an interdisciplinary field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from many structural and unstructured data.

There are many more job titles that are related to data.Data Scientists have been on the frontier of data for way too long, it is time for the emerging of Data Engineers and other data-related roles. Data-driven businesses are worth $1.2 trillion collectively in 2020. According to the IDG Cloud Survey, which collects data from 551 large tech buyers, states that only 38% of their total IT environments are on the cloud as of today (2020). In 18 months, these IT environments are expected to hit 59% on the cloud. The same tech buyers are also allocating 32% of the IT budget to cloud computing, which amounts to $73.8M per Tech Firm (59% increase from 2018). After a huge influx of Data Scientists, companies realized they needed the proper data infrastructure to perform any meaningful analysis on the data. Companies have started to spend money on proper cloud infrastructure, data architecture, and hiring new data engineering talents. The data engineering services market is experiencing an 18% growth p.a, which is expected to hit 31% p.a by 2025. Data Engineers are able to answer questions like —

When an event happens on the site, what happens in the master database?
Why are the tables in the data warehouse structured like that?
Why do we extract data on a daily basis instead of hourly?

Our main goal is to to make our students ready for answering questions on the above said areas by providing experiential learning opportunities such as hands-on training, project-based courses, research projects, and internships which provide a solid foundation to work in interdisciplinary teams that invents the future. The Department covers a wide expertise in the areas of Databases, SQL and NoSQL, Data Mining, Big-Data Analytics, and Cloud Infrastructure led by qualified and experienced team of faculty members. The objective of this course is to make students ready for industry with practical exposure in Data Engineering.

Together we shall achieve great heights.

Best Regards and Great Future!!
Dr. Ekta Upadhyay

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Upcoming Events For September
Workshop on Data Engineering
Insights.

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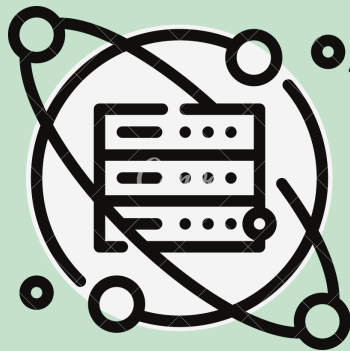Accredited with B+ Grade by NAAC | A Gujarati Linguistic Minority Institution

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Job Profile For DE

Data Architect: A data architect lays down the foundation for data management systems to ingest, integrate and maintain all the data sources. This role requires knowledge of tools like SQL, XML, Hive, Pig, Spark, etc.

Database Administrator: As the name suggests, a person working in this role requires extensive knowledge of databases. Responsibilities entail ensuring the databases are available to all the required users, is maintained properly and functions without any hiccups when new features are added.

Data Engineer: The master of the lot. A data engineer, as we've already seen, needs to have knowledge of database tools, languages like Python and Java, distributed systems like Hadoop, among other things. It's a combination of tasks into one single role.

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What is difference between Data Scientist, Data Analyst, & Data Engineer?

For example, imagine that a company sells many different types of sofas on their website. Each time a visitor to the website clicks on a particular sofa, a new piece of data is created.
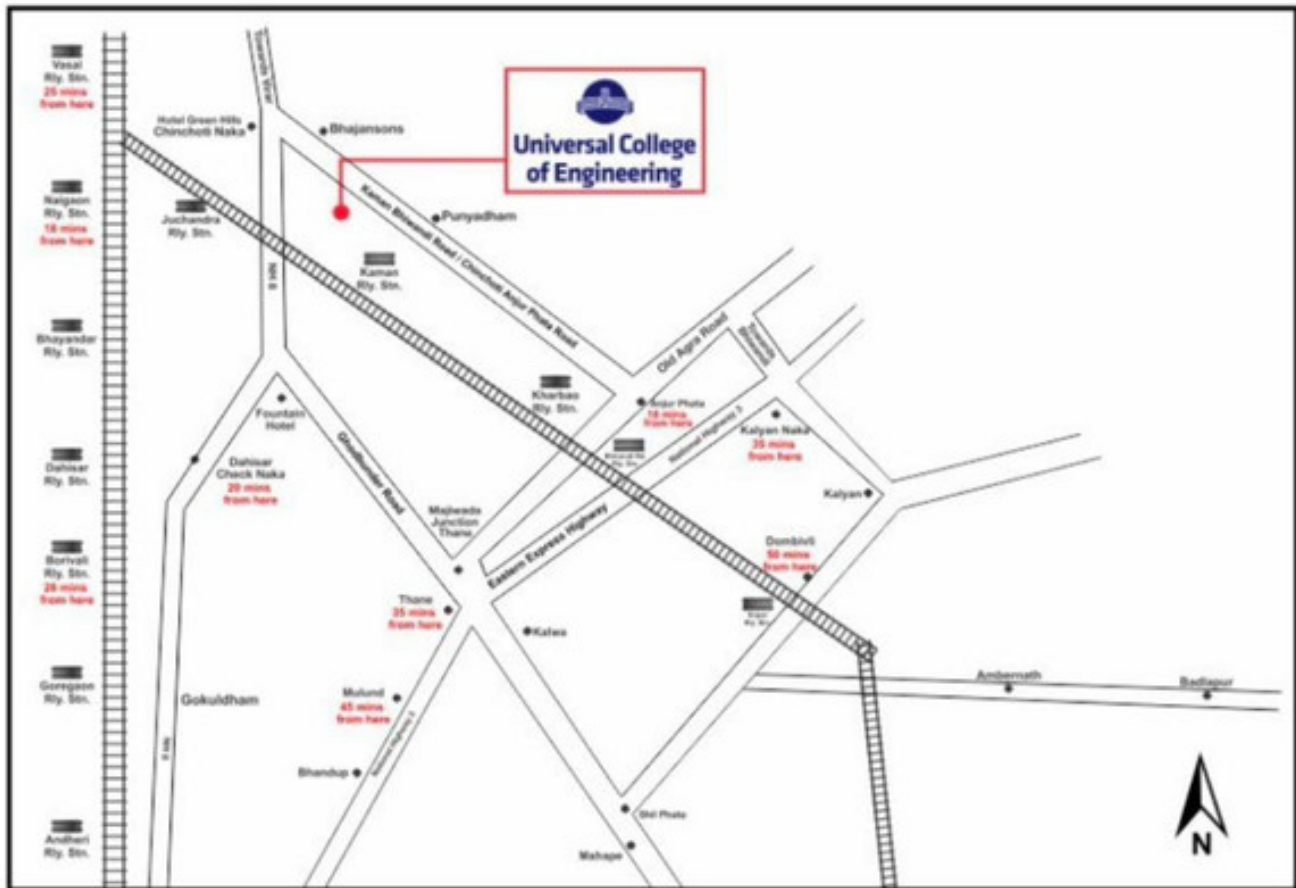
A Data Engineer would define how to collect this data, what types of data should be appended to each click event, and how to store the data in an easy-to-access format.

A Data Analyst would create visualizations to help sales and marketing track who is buying each sofa and how much money the company is making.

A Data Scientist would take the data on which customers bought each sofa and use it to predict the perfect sofa for each new visitor to the website.

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