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RESPIRE FELLOWSHIP UPDATE

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Activity Area

- Data Management
- Application Development Using Open Source Technologies (RedCap, OpenClinica, Survey Solutions)
- Data Sharing and Repository Management
- Providing Pre-Study Data
- Data analysis

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Background and objectives

- Gain proficiency in Data Science methodologies with Python.
- Unlock artificial intelligence capabilities with Python.
- Learn the fundamentals of Machine Learning models.
- Study statistical techniques to understand data distributions and trends.

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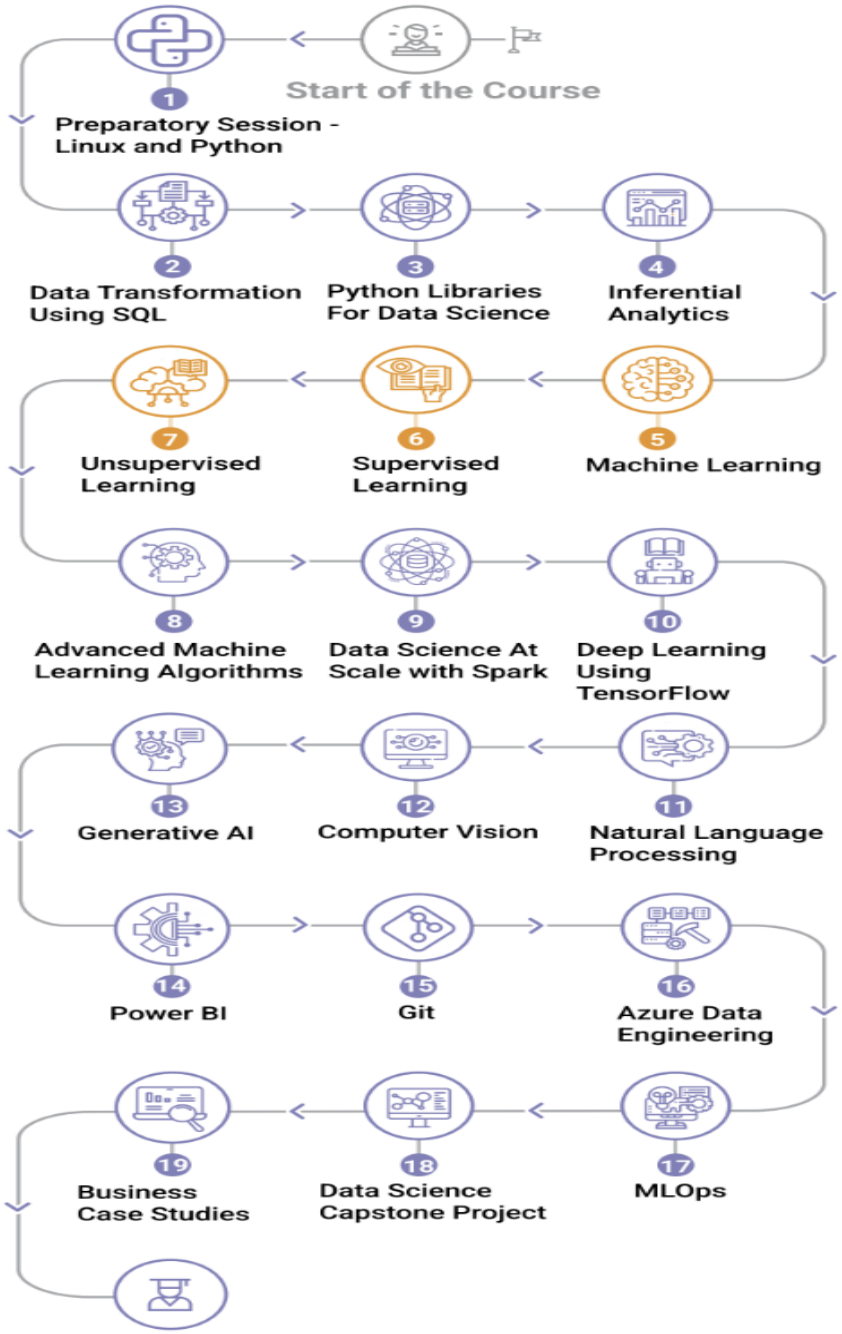
Activities

- I’m currently pursuing a course named “Certification in Data Science and AI.”
- It is 11 month course from the iHub IIT Roorkee.



Executive Post Graduate Certification in Data Science & Artificial Intelligence

Activities

Skills to Master

- Python
- GIT
- Story Telling
- PySpark
- Data Science
- MLOps
- Machine Learning
- Model
- Data Analysis
- Data Wrangling
- Prediction algorithms
- Data visualization
- AI
- SQL
- NLP
- Azure Data Factory

Tools to Master

PySpark, python, jupyter, SciPy, NumPy, pandas, matplotlib, TensorFlow, SQL, Power BI, Excel, git, Spark SQL

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Outcome

- **Machine Learning Professional**: Employing advanced machine learning algorithms to create statistical models.

- **AI Specialist:** Designing frameworks and technologies to advance AI solutions in health research.

- **Business Analyst:** Extracting data from respective sources to perform business analysis and create reports, dashboards.

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Operational Area

- Managing data collection processes
- Handling query resolution tasks
- Performing initial data cleaning
- Weekly report creation and sharing

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Background and objectives

- Understand the fundamental concepts of data such as data types, structures, and storage
- Develop skills in exploring and visualizing data using tools like Python
- Learn statistical techniques and methods for data distributions and data trends.
- Learn statistical techniques for analyzing data, such as descriptive statistics, inferential statistics, and hypothesis testing.
- Gain skills in cleaning and preprocessing data to ensure its quality and suitability for analysis.
- Become proficient in creating meaningful visualizations using software like Tableau and PowerBI.

Improving professional skills

- Strengthening institutional capabilities.
- Designing the Dashboards.

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Activities

- I’m currently pursuing a course named “Executive Post Graduate Certification In Data Analytics.”
- It is 9 month course from the iHub IIT Roorkee.

Skills to Master

- Python and Data Analysis.
- Machine Learning and AI
- Excel base data analysis
- Prediction algorithms.

Tools to Master

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Outcome

- **Machine Learning Expertise:** Applying various machine learning technologies to build statistical models.

- **AI Expertise :**Developing strategies for frameworks and technologies to develop AI solutions for the health research.

- **Business Analyst:** Extracting data from respective sources to perform business analysis and create reports, dashboards.

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Way forward

- Institutional Capacity Building and Data Management Enhancement.
- Plan a hybrid workshop that will explore the use of ML and AI in the RESPIRE study.
- Supporting in orienting the identified RESPIRE Data Champions for better Data Management and Analytics.

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