Data Science & Analytics SkillJourney

Data Skills Academy: Data Analyst, Business Intelligence & Applied AI Essentials Boot Camp (TTDS6800)

Empowering Future Analysts with Cutting-Edge, Job Ready Skills in Data Science, Analytics, BI and AI for Data

Course Snapshot

- **Course: Data Skills Academy: Data Analyst, Business Intelligence & Applied AI Essentials Boot Camp (TTDS6800)**
- **Duration**: 12 weeks, 20 hour per week
- **Audience & Skill Level:** The ideal audience for this "Getting Started" style, workshop-focused program includes individuals who are enthusiastic about beginning a career in business intelligence (BI) and data analysis, especially those who are looking to leverage AI tools to enhance their analytical capabilities.
- **Hands-on:** This program combines engaging instructor-led presentations and practical demonstrations with hands-on exercises, challenge labs, use case exploration and engaging group activities. Student machines are required.
- **Format**: This course can be delivered for your team or organization **online live (virtual)**, **onsite in-person** or across our robust **blended learning experience platform (LXP).**
- **Customizable**: This course agenda, topics, labs, hours and delivery modalities can be adjusted to target your specific training skills objectives, tools and learning goals. Please ask for details.

Overview

The **Data Skills Academy: Data Analyst, Business Intelligence & Applied AI Essentials Boot Camp** is dynamic 12-week boot camp style program that offers an engaging workshop-style experience, designed to immerse aspiring Business Intelligence (BI) and Data Analysts in the practicalities of the field, with a strong emphasis on hands-on learning. Approximately half of the course time is dedicated to in-depth, practical exercises, allowing participants to apply the concepts they learn in real-time. The curriculum, crafted to be at the forefront of BI and data analysis education, is delivered through a user-friendly platform. This platform not only presents the course content but also integrates knowledge checks, group activities, and a wealth of resources to support the learning journey.

Leading the program is an industry expert, whose real-world experience adds invaluable depth to the learning process. Their insights ensure that participants not only understand the theoretical aspects of BI and data analysis but also appreciate their practical applications in a professional setting. This approach is particularly effective in making the course content relatable and ensuring that students are job-ready by the end of the program. Key topics include the fundamentals of data analysis and BI, the integration of AI tools in data processing, and the development of essential skills in Excel, SQL, Power BI, and Python.

Post-course, participants will benefit from continued access to the learning platform for one year, allowing them to revisit the material and further consolidate their skills. The platform's combination of content delivery, interactive elements, and additional resources creates an environment conducive to both immediate learning and long-term professional development. This program is ideal for those seeking a comprehensive, hands-on, and expert-led entry into the ever-evolving world of BI and data analysis. It's designed to be approachable, yet thorough, ensuring participants are not only well-versed in the latest industry practices but are also equipped with the knowledge and confidence to apply them in their future careers.

This program, designed for those eager to embark on a career in business intelligence (BI) and data analysis while harnessing AI tools to bolster their analytical prowess, welcomes participants from diverse backgrounds. By successfully completing this workshop-style program, individuals can qualify for roles such as data analyst, business intelligence analyst, data visualization specialist, AI data analyst, and data quality analyst. These roles encompass responsibilities ranging from collecting, processing, and analyzing data to designing BI solutions, creating visualizations, and ensuring data accuracy within organizations, all while leveraging AI techniques for enhanced insights.

Learning Objectives

Working in an interactive learning environment, led by our engaging expert you'll gain:

- **Mastery of Fundamental Data Analysis**: Achieve a high level of competence in core data analysis techniques, enabling confident data interpretation.
- **Proficiency in Advanced Excel Applications**: Attain advanced Excel skills, including pivot tables, complex functions, and dynamic data visualization for sophisticated data handling.
- **Adept SQL Data Management**: Develop expertise in SQL, encompassing efficient database management, advanced queries, and database design comprehension.
- **Comprehensive Power BI Reporting**: Gain mastery over Power BI, effectively crafting insightful reports, and interactive dashboards, with a focus on data storytelling.
- **Introduction to Python for Data Processing**: Acquire foundational knowledge in Python programming, emphasizing data manipulation and visualization through libraries such as pandas and Matplotlib.
- **Understanding AI in Data Analysis**: Explore essential AI concepts applicable to data analysis, integrating AI tools within Excel and Power BI for enhanced data processing.
- **Ethical Data Exploration and Governance**: Delve into the significance of data ethics, privacy, and governance frameworks, ensuring ethical data usage in analysis.
- **Expertise in Exploratory Data Analysis (EDA)**: Develop skills in conducting thorough EDA, utilizing data visualization tools to uncover patterns, anomalies, and insights within datasets.
- **Scripting and Automation Efficiency**: Master the basics of scripting and automation in data analysis to optimize workflows and boost productivity.
- **Practical Capstone Project Experience**: Apply acquired skills to a real-world capstone project, simulating authentic data analysis scenarios to demonstrate professional readiness.

Audience

The ideal audience for this "Getting Started" style, workshop-focused program includes individuals who are enthusiastic about beginning a career in business intelligence (BI) and data analysis, especially those who are looking to leverage AI tools to enhance their analytical capabilities.

Here are a few roles participants can be qualified for as a result of successfully attending this program:

- **Data Analyst**: As a data analyst, you'll be responsible for collecting, processing, and analyzing data to provide actionable insights and support decision-making within organizations. You'll create reports, dashboards, and visualizations to convey your findings.
- **Business Intelligence Analyst**: Business intelligence analysts focus on using data to improve business operations. They design and develop BI solutions, create performance metrics, and work closely with teams to drive data-driven decision-making.
- **Data Visualization Specialist**: Data visualization specialists specialize in transforming complex data into visually compelling and easy-to-understand graphics, charts, and dashboards. They play a crucial role in making data accessible to non-technical stakeholders.
- **AI Data Analyst**: With an understanding of AI tools, you can work as an AI data analyst, using machine learning and AI techniques to extract insights and predictions from large datasets. This role is at the intersection of data analysis and artificial intelligence.
- **Data Quality Analyst**: Data quality analysts ensure that data used by organizations is accurate, reliable, and consistent. They develop data quality standards, monitor data integrity, and implement strategies to enhance data quality.

Pre-Requisites

This program is designed for beginners, so no prior experience in BI or data analysis is necessary. However, participants should possess the following foundational skills to maximize their learning experience:

- Participants should be comfortable using a computer and have a fundamental understanding of file management, software installation, and navigating operating systems.
- A basic understanding of mathematics, including concepts like arithmetic, percentages, and basic statistics, will be

beneficial for comprehending data analysis principles.
- Strong critical thinking skills and problem-solving abilities are essential for dissecting data challenges and deriving meaningful insights.
- Effective communication is key in the field of BI and data analysis. Participants should have good verbal and written communication skills to articulate findings and insights.

Course Topics / Agenda

Please note that this topics, agenda and labs are subject to change, and may adjust during live delivery based on audience skill level, interests and participation.

Week 1: Introduction to Data Analysis and Business Intelligence
- **Overview**: Understanding the basics of data analysis and the role of BI in decision-making.
- **Day One**: Introduction to BI and Data Analysis Concepts.
- **Day Two**: Basic Statistics and Data Interpretation.
- **Day Three**: Exploring AI in Data Analysis - An Overview.
- **Day Four**: The BI Process and Lifecycle.
- **Day Five**: Case Studies: BI in Action.
- **Hands-On**: Analyzing sample datasets, basic AI-powered data analysis using simple tools.
- **Tools**: Excel, AI-powered data analysis tools (basic level).

Week 2: Excel for Data Analysis
- **Overview**: Leveraging Excel for foundational data analysis tasks.
- **Day One**: Basic Excel Features and Data Entry.
- **Day Two**: Formulas, Functions, and Data Manipulation.
- **Day Three**: Introduction to Pivot Tables.
- **Day Four**: Charting and Basic Data Visualization.
- **Day Five**: Excel's AI-powered Insights for Data Analysis.
- **Hands-On**: Excel exercises, using Excel's AI features for data insights.
- **Tools**: Excel.

Week 3: Introduction to SQL and Databases
- **Overview**: Basics of SQL for data management and querying.
- **Day One**: Introduction to Databases.
- **Day Two**: Basic SQL Queries.
- **Day Three**: Intermediate SQL: JOINs, Aggregations.
- **Day Four**: SQL Data Functions and Advanced Queries.
- **Day Five**: AI in Database Management: An Introduction.
- **Hands-On**: Structured SQL exercises, exploring AI features in database management systems.

- **Tools**: SQLite, basic SQL database tool.

Week 4: Introduction to Power BI
- **Overview**: Getting started with Power BI for data visualization and reporting.
- **Day One**: Basic Setup and Data Import.
- **Day Two**: Creating Basic Reports.
- **Day Three**: Basic Visualizations.
- **Day Four**: Power BI and AI: Automated Insights.
- **Day Five**: Introduction to DAX.
- **Hands-On**: Building reports and visualizations, using AI insights in Power BI.
- **Tools**: Power BI.

Week 5: Advanced Excel and Power BI
- **Overview**: Advanced techniques in Excel and Power BI.
- **Day One**: Advanced Excel Functions.
- **Day Two**: Dynamic Dashboards in Power BI.
- **Day Three**: Power BI for AI-powered Forecasting.
- **Day Four**: Advanced DAX Functions.
- **Day Five**: Real-world BI Reporting Scenarios.
- **Hands-On**: Complex Excel projects, AI-powered forecasting in Power BI.
- **Tools**: Excel, Power BI.

Week 6: Basic Python for Data Analysis
- **Overview**: Introduction to Python programming for data analysis.
- **Day One**: Python Setup and Basic Syntax.
- **Day Two**: Python for Data Manipulation (pandas).
- **Day Three**: Data Cleaning with Python.
- **Day Four**: Basic Data Visualization with Python.
- **Day Five**: Introduction to AI Libraries in Python.
- **Hands-On**: Python projects, using AI libraries for basic tasks.
- **Tools**: Python, Jupyter Notebook.

Week 7: Basic AI Concepts for Data Analysis
- **Overview**: Introduction to AI and its application in data analysis.
- **Day One**: AI vs. Machine Learning: Understanding the

Basics.
- **Day Two**: AI in Data Analytics: Use Cases.
- **Day Three**: Introduction to Simple AI Models.
- **Day Four**: AI Tools for Data Analysis (e.g., Automated Analysis Tools).
- **Day Five**: Ethical Considerations in AI.
- **Hands-On**: Simple AI model implementations, ethical scenario analysis.
- **Tools**: AI analysis tools (basic level).

Week 8: Advanced Reporting and Data Visualization in BI
- **Overview**: Advanced skills in data visualization and reporting using BI tools.
- **Day One**: Advanced Data Import and Transformation in Power BI.
- **Day Two**: AI-Enhanced Reporting in Power BI.
- **Day Three**: Interactive Dashboard Design.
- **Day Four**: Data Storytelling and Visualization Best Practices.
- **Day Five**: Advanced Reporting Strategies and Techniques.
- **Hands-On**: Creating interactive dashboards, using AI for advanced reporting.
- **Tools**: Power BI.

Week 9: Data Ethics, Governance, and Exploratory Data Analysis
- **Overview**: Understanding the importance of ethics and governance in data and learning EDA techniques.
- **Day One**: Data Ethics and Ethical Data Collection.
- **Day Two**: Data Governance Frameworks and Compliance (e.g., GDPR).
- **Day Three**: Basics of Exploratory Data Analysis.
- **Day Four**: Visualization Techniques in EDA.
- **Day Five**: AI Tools for EDA.
- **Hands-On**: Exploring datasets with EDA techniques, using AI tools for EDA.
- **Tools**: Python, R, or Excel, AI tools for EDA.

Week 10: Introduction to Scripting and Automation
- **Overview**: Scripting and automation to enhance data analysis efficiency.
- **Day One**: Introduction to Scripting for Data Analysis.
- **Day Two**: Basics of Automation in Data Analysis.
- **Day Three**: Automating Data Cleaning.
- **Day Four**: Building Automated Reporting Systems.
- **Day Five**: AI Tools for Automation in Data Analysis.
- **Hands-On**: Developing scripts for data tasks, using AI tools for automation.
- **Tools**: Python, basic AI tools for automation.

Week 11: Exploratory Data Analysis and Advanced Topics
- **Overview**: Deepening EDA skills and exploring advanced data analysis topics.
- **Day One**: Advanced EDA Techniques.
- **Day Two**: Time Series Analysis Basics.
- **Day Three**: AI for Predictive Analysis.
- **Day Four**: Integrating AI with BI Tools.
- **Day Five**: Real-World Case Studies in Advanced Data Analysis.
- **Hands-On**: Advanced EDA projects, AI-powered predictive analysis.
- **Tools**: Python, Power BI, AI analysis tools.

Week 12: Capstone Project and Presentation
- **Overview**: Application of all learned skills in a practical project.
- **Hands-On**: Developing and finalizing the capstone project incorporating AI and BI tools.
- **Presentation**: Presenting the capstone project at the end of the week.
- **Review and Feedback**: Feedback session on the project and presentation.
- **Tools**: All tools learned throughout the program.

Setup Made Simple! Learning Experience Platform (LXP)

All applicable course software, digital courseware files or course notes, labs, data sets and solutions, live coaching support channels, CodeCoach.AI anytime tutor access, and rich extended learning and post training resources are provided for you in our "easy access, single source, no install required" online **Learning Experience Platform (LXP),** remote lab and content environment. Access periods vary by course. We'll collaborate with you to ensure your team is set up and ready to go well in advance of the class. Please inquire about set up details and options for your specific course of interest.

For More Information

For more information about our training services (instructor-led, self-paced or blended), collaborative coaching services, robust Learning Experience Platform (LXP), Career Experiences, public course schedule, partner programs, courseware

licensing options or to see our complete list of course offerings, solutions and special offers, please visit us at **www.triveratech.com**, email **Info@triveratech.com** or call us toll free at **844-475-4559.** Our pricing and services are always satisfaction guaranteed.

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