AI Data Manager 250 Hours

Requirements

Technology degree or Technological background

Preference for people with experience in QA for at least a year.

Course content

Week 1-4 (20 hours):
- Introduction to Data Management and AI
- Overview of AI, Machine Learning, and Deep Learning
- Introduction to Data Management, Data Annotation, and Data Quality Control
- Introduction to Python programming
- Basic Data Types, Variables, Operators, and Control Structures in Python
- Hands-on exercises using Python for Data Management

Week 5-6 (10 hours):
- Data Management Best Practices
- Data Cleaning and Transformation
- Data Quality Control and Validation
- Introduction to SQL and Relational Databases
- Basic SQL Operations
- Hands-on exercises using SQL for Data Management

Week 7-8 (10 hours):
- Data Modeling and Metadata
- Introduction to Data Modeling
- Overview of Metadata and Data Dictionaries
- Hands-on exercises using Data Modeling Tools

Week 9-10 (10 hours):
- Data Management, Quality management and Data Annotation tools
- Hands-on exercises using a few industry tools. Tableau, CVAT, AWS S3

Week 11-12 (10 hours):
- Deep Learning Basics
- Neural Networks and Convolutional Neural Networks
- Transfer Learning and Fine-tuning
- Hands-on exercises using TensorFlow and Keras

Week 13-14 (10 hours):
- Data Security and Compliance
- Overview of Data Security and Privacy Regulations and Standards
- Introduction to Data Encryption, Anonymization, and Pseudonymization
- Data Security and Compliance Best Practices
- Review of course materials
- Final Project: Applying Data Management and AI Techniques to a Real-world Problem

Additional Topics:
- Data Labeling - 90 minutes
- Ground Truth Data - 90 minutes
- Synthetic Data - 90 minutes
- Chief Data Officer Perspective - 90 minutes
- Ethics:
    - Lecture 1: Introduction to AI Ethics and Its Importance
      Duration: 90 minutes
      1. Introduction to AI Ethics (10 min)
            - What is AI ethics?
            - Why is it important?
      2. Historical context of AI ethics (20 min)
            - AI and its impact on society
            - Early concerns about AI's ethical implications
            - The Asilomar AI Principles
      3. Key ethical principles in AI (30 min)
            - Transparency
            - Accountability
            - Fairness
            - Privacy
            - Security
      4. Real-world examples of ethical challenges (20 min)
            - Bias in AI algorithms
            - Surveillance and privacy concerns
            - Autonomous weapons
      5. Discussion and Q&A (10 min)

o Lecture 2: Bias and Fairness in AI Systems
Duration: 90 minutes
1. Defining bias and fairness (15 min)
    - Types of bias
    - Fairness in AI systems
2. Causes of bias in AI (30 min)
    - Data bias

    - Algorithmic bias
    - Human bias
3. Mitigating bias in AI (30 min)
    - Pre-processing techniques

    - In-processing techniques
    - Post-processing techniques
4. Case studies of biased AI systems (10 min)
    - Gender bias in recruitment tools
    - Racial bias in facial recognition software
5. Discussion and Q&A (5 min)

o Lecture 3: AI Transparency and Explainability
Duration: 90 minutes
1. Defining transparency and explainability (15 min)
    - Importance of transparency in AI systems
    - Explainability in AI decision-making
2. Approaches to achieving transparency and explainability (30 min)
    - Interpretable models
    - Post-hoc explanations
    - Local and global explanations
3. Challenges and limitations (30 min)
    - Trade-offs between accuracy and explainability
    - Legal and ethical considerations
4. Real-world examples of transparent AI systems (10 min)
    - Explainable AI in healthcare
    - Transparency in AI-powered credit scoring
5. Discussion and Q&A (5 min)

o Lecture 4: AI Accountability and Responsibility
Duration: 90 minutes
1. Defining accountability and responsibility in AI (15 min)
    - Moral and legal responsibility
    - Challenges in assigning responsibility

2. Approaches to AI accountability (30 min)
    - Algorithmic auditing
    - AI governance structures
    - Regulation and standardization
3. AI liability and legal frameworks (30 min)

- Existing legal frameworks
                                - Emerging regulations and guidelines
                                - International perspectives on AI liability
                    4. Case studies of AI accountability (10 min)
                                - AI accidents and incidents
                                - Legal disputes involving AI systems

                    5. Discussion and Q&A (5 min)

Lecture 5: AI Privacy and Security
                    Duration: 90 minutes
                    1. Defining privacy and security in AI (15 min)
                                - Privacy concerns in AI applications
                                - AI security risks and vulnerabilities

                    2. Techniques for preserving privacy in AI (30 min)
                                - Differential privacy
                                - Federated learning
                                - Secure multi-party computation
                    3. AI security best practices (30 min)
                                - Adversarial robustness
                                - AI incident response planning
                                - Secure AI development lifecycle
                    4. Real-world examples of AI privacy and security challenges (10 min)
                                - Data breaches involving AI systems
                                - AI-powered disinformation campaigns
                    5. Discussion and Q&A (5 min)

Testing and Practical Sessions (100 hours):

- Quizzes and exams to test the understanding of the course material
- Practical exercises to apply the knowledge to real-world problems
- Data annotation, data quality control, and data cleaning tasks to simulate real-world scenarios

Overall, the course will provide a mix of theoretical and practical sessions, including hands-on exercises, real-world projects, and assessments, to develop the necessary skills and knowledge to become a Junior Data Manager specialized in AI. The course will also cover additional topics relevant to Chief Data Officer perspective, such as data labeling, ground truth data, and synthetic data, to provide a more comprehensive understanding of the field.
Background:

Based on the job description below, Create a 250 hours, for 12 weeks, with 10 hours weekly (twice a week 5 hours) weekly syllabus for an AI ML/DL in presence and online training for employees seeking to become AI Data Officer course in the hi-tech industry, and become AI Data Officer experts, take the job description and create an amazing syllabus, mix theoretical and practical

sections, 150 hours of classes, 50 hours of practical and 50 of tests, add 4 hours of Data labeling, Ground truth data, Synthetic Data, but focused on Chief Data Officer perspective: Job Title: Junior Data Manager - AI

Company Overview: [Company Name] is a major hi-tech company specializing in AI-driven products and services. We are seeking a highly motivated Junior

Data Manager with a passion for data and a desire to learn and grow in the field of AI.

Job Description:

As a Junior Data Manager - AI, you will be responsible for supporting the management and organization of large volumes of data related to our AI projects. You will work closely with Data Scientists and other team members

to ensure that data is properly collected, processed, and stored. Your duties will include but are not limited to:

Work with data annotators, and the main focal point with the R&D, data scientists, and data analysts to build and maintain a cutting-edge AI data infrastructure, ensuring the accuracy, completeness, and integrity of our data, and developing innovative solutions to improve data quality and efficiency.

Assist with data quality control and validation procedures
Support data analysis and reporting efforts
Assist with the creation and maintenance of data dictionaries and other metadata
Help with the development and implementation of data management policies and procedures
Contribute to the development of automated data processing systems
Perform data cleaning and transformation tasks
Collaborate with other team members to ensure data security and compliance with relevant regulations and standards
Participate in training sessions and other learning opportunities to develop skills in AI and data management

Competitive salary and benefits package
Opportunities for career growth and advancement within the company
Access to training and development programs to enhance skills in AI and data management

Collaborative and innovative work environment
If you are passionate about data and have a desire to learn and grow in the field of AI, we encourage you to apply for this exciting opportunity to join our team as a Junior Data Manager - AI.

Teachers:
Gil Shapira - Director of AI/CV Data Quality HI4.AI (Ex Intel, Ex Orca AI)

Gil Shapira, married+1, from Kiryat Bialik, Israel.
The Founder of TIQINO and Director of AI/CV Data Quality at HI4AI.

In the past 10 years I helped the building operations, ML/DL models and products of very challenging projects of the world's leading companies in their fields, such as Intel and Orca AI, from the foundations up to the final products.
Also Including establishing and managing projects and teams from scratch.
I believe that the future is to improve the various daily experiences of people around the world through AI-based solutions.
This is my motivation and professional passion, in order to build a better future for my son, my family and my surroundings, for all of us.

Slava Kachanovsky - Data Scientist - Meta
The hebrew University of Jerusalem - B.A. Statistics
Open University MBA, Business
Meta, Investing, Caesars entertainment
Highly motivated analytical leader with strong data science skills, as well as experience in Data Analysis, business intelligence and management. Expertise with data science teams building, developing and deploying ML algorithms, designing and implementing end-to-end analytical solutions, serving business goals and supporting decisions. Proven leadership abilities, multiple teams management skills coupled with the ability to accomplish big projects.

Barak Ben Kimhy - BI Data Analyst Optibus

The Open University of Israel - BA, Management & Communication
Experienced Analyst that Understand the world of digital marketing, experienced in building & driving successful products and journeys, with the right blend of marketing skills with an analytical mind & data analysis skills.

Highly experienced with A/B Testing (Optimizely), BI and data visualization tools (Tableau, Looker, Power BI & QlikView), Paid marketing platforms (Google Ad Manager, Google Tag Manager, DBV360, Taboola, Outbrain, Facebook, Appsflyer) Working on a daily basis with Snowflake, Google Big Query & SQL for Data Analysis.

Omid Vahdaty - CTO - Jutomate (Ex Walla, Ex Investing) - Big Data Demystified
Funder

- The Interdisciplinary Center - GMBA, Business, Innovation and Entrepreneurship

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- Reichman University - BA, Computer Science

I specialize in Big Data Architecture, Product innovation & strategic engineering thinking , while designing the systems in a startup environment (agile, cost effective, high stress, fast learning curve). These positions require knowledge

about several areas. Making me a unique person with a unique product view on a company R&D and Biz process.

Skills : Executive management with high execution skills, Big Data, Engineering, Product management, Pre-sale,Cloud Architecture, Open Source

(flume/kafka/Hadoop) , HPC, Innovation, building startups teams from the ground up,SCRUM.

Beni Issembert - Research, Ethics and Communities - Metaphysic.ai
The Johns Hopkins UniversityThe Johns Hopkins University
Doctor of Philosophy - PhD, History and Philosophy of Science and TechnologyDoctor of Philosophy - PhD, History and Philosophy of Science and Technology
Under the supervision of Peter Achinstein and Jacques Neefs. " Nietzsche's Philosophy of Science, toward a new ethics beyond good and evil".
Tel Aviv University - Master's Degree, Theory of LiteratureMaster's Degree, Theory of Literature
The College of Management Academic Studies - Certification, Risk Management
Tel Aviv University - Bachelor's Degree, Philosophy, History and literature
Twenty years of proven experience in innovative and futuristic science-based technologies.

מי אנחנו?

SQLabs מבית SQLink הינה המכללה הטכנולוגית המובילה למקצועות הפיתוח, אבטחת מידע, מקצועות הנתונים והמידע ועוד .

אנו מציעים מגוון רחב של קורסים בטכנולוגיות ובנושאים המתקדמים והדרושים ביותר בתעשייה אשר מועברים על ידי מיטב המרצים בשוק.

צוות ההדרכה שלנו מורכב ממרצים אשר עובדים בתעשיית ההייטק ומביאים את ניסיונם העשיר בתחום לקורס.

למה ללמוד אצלנו?

- ✓ **סגל מרצים מקצועי** אשר מגיע מתעשיית ההייטק ומביא את ניסיונו העשיר לכיתה.
- ✓ **תיק עבודות** מפורט המותאם לדרישות השוק.
- ✓ **קורס אנגלית עסקית** - בהכשרה שלנו תקבלו את כל הידע שתצטרכו בשפה האנגלית.
- ✓ **קורס הכנה לראיונות עבודה** הכולל סדנאת קורות חיים וכתיבת פרופיל לינקדאין.
- ✓ **יחס אישי וסביבה תומכת לכל תלמיד**, החל מתהליך הרישום, סביבת המחשוב, חומרי העזר ועוד .
- ✓ **הקורסים מוצעים במחירים אטרקטיביים** המאפשרים לכל אחד ואחד לשדרג את היכולות המקצועיות שלו וזאת מבלי להתפשר על איכות ההדרכה.
- ✓ **לימודים במודל ההיברידי** – הקורס מתבצע בזום + פרונטלי לבחירתכם! תוכלו לצפות בלייב גם בשיעורים הפרונטליים.

SQLabs
מקבוצת SQLINK

מבין לקוחותינו:

J.P.Morgan · NCR · לאומי leumi · AT&T · Cal.

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שירות הביטחון הכללי · BROADCOM · Apple · Google · Webhelp

kaltura · harmonic · Elbit Systems · בנק הפועלים

Qualcomm · NVIDIA · SONY · ebay

לפרטים נוספים נשמח לעמוד לשירותכם,
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