



OSLOMET



PRØVE

DAVE3625 1 Introduksjon til Kunstig Intelligens

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Seksjon 1

Oppgave	Oppgavetype
i	Informasjon eller ressurser

Seksjon 2

Oppgave	Oppgavetype
1	Flervalg
2	Flervalg
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27	Flervalg
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29	Flervalg (flere svar)
30	Flervalg
31	Flervalg
32	Flervalg
33	Flervalg
34	Flervalg
35	Flervalg
36	Flervalg
37	Flervalg
38	Flervalg
39	Flervalg



- 1 Which one of the following is the largest and fastest growing sector for AI-related global investment (2018-2019)?

Select one alternative:

- ☐ Facial Recognition
- ☐ Autonomous driving
- ☒ Drug, cancer study
- ☐ Robotic automation

- 2 Which country got the most private investments (for startups) in Artificial Intelligence (in 2018) in terms of per capita (dollar per person) ?

Select one alternative:

- ☐ United States
- ☐ China
- ☐ Singapore
- ☒ Israel



3 Many people consider Artificial Intelligence as the

Select one alternative:

- ☐ Sixth industrial revolution
- ☐ Fifth industrial revolution
- ☒ Fourth industrial revolution
- ☐ Third industrial revolution

4 Which of the following is true for General Artificial Intelligence ?

Select one alternative:

- ☒ Takes knowledge from one domain and transfers it to other domain
- ☐ Dedicated to assist with or take over specific tasks
- ☐ Machines which are an order of magnitude as intelligent or more intelligent than humans

5 Chatbots and Voice assistants (Siri, Alexa, Google assistant) are examples of

Select one alternative:

- ☐ General AI
- ☒ Narrow AI
- ☐ Super AI

**6** What is a Turing test in Artificial Intelligence?**Select one alternative:**

- ☒ A method for determining whether or not a computer is capable of thinking like a human being.
- ☐ A method for determining whether or not a computer is capable of thinking like Super AI
- ☐ A method for determining whether or not a computer is capable of thinking like General AI

7 While working with creating Artificial Intelligence applications, In which area do AI programmers spend most of their time**Select one alternative:**

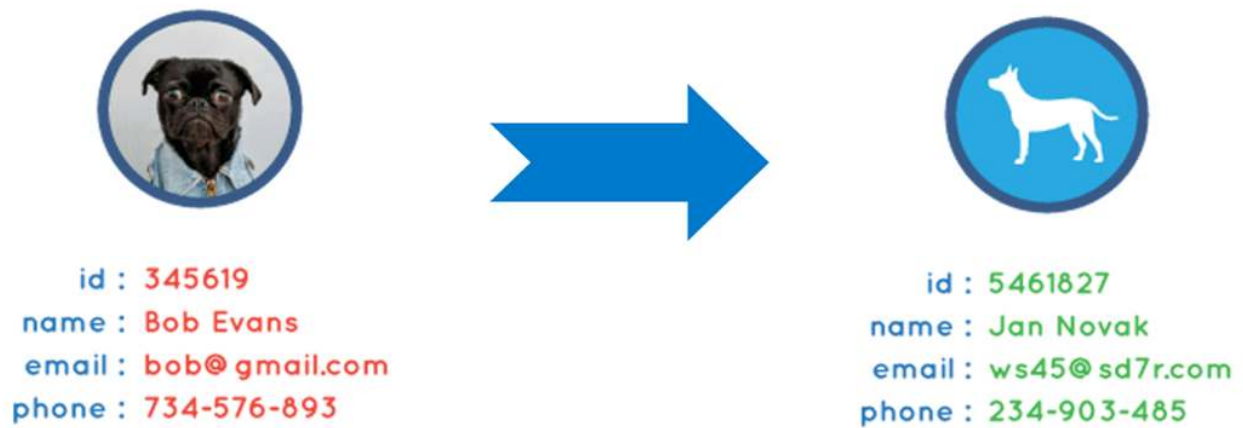
- ☐ Model deployment
- ☒ Data processing (cleaning, labeling etc)
- ☐ A.I programming
- ☐ Model development

8 A data point which differs significantly from other observed data points is called**Select one alternative:**

- ☐ Labeled data
- ☐ Synthetic data
- ☒ Outlier



9 What is the figure below an example of?



Select one alternative:

☐ Synthetic data generation

☒ Data anonymization

☐ Feature engineering

☐ Data labeling

10 The process of using domain knowledge of a data set to create new attributes from existing data points/attributes is called

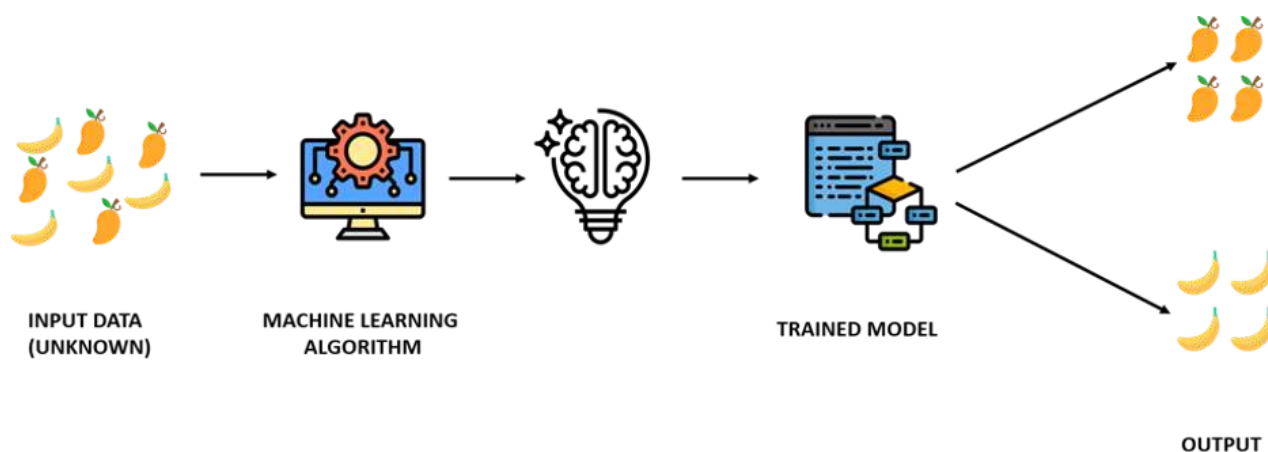
Select one alternative:

☒ Feature engineering

☐ Synthetic data generation

☐ Data labeling

11 Which type of machine learning is shown in this image ?



Select one alternative:

- ☐ Recommender systems
- ☐ Reinforcement learning
- ☒ Unsupervised learning
- ☐ Supervised learning

12 In a specific kind of machine learning, an agent can learn in an interactive environment by trial and error using feedback from its own actions and experiences. This is

Select one alternative:

- ☐ Supervised learning
- ☐ Unsupervised learning
- ☐ Recommender systems
- ☒ Reinforcement learning



13 What kind of algorithm is Logistic regression ?

Select one alternative:

- ☐ Clustering algorithm
- ☐ Regression algorithm
- ☐ Association algorithm
- ☒ Classification algorithm

14 The output of a sigmoid function (for classification algorithms) has a range from

Select one alternative:

- ☐ 0 to 10
- ☒ 0 to 1
- ☐ 0 to 1000
- ☐ 0 to 100



- 15** Suppose that you are given the previous tax information of all individuals and you now have to develop an algorithm which predicts how much tax will they submit next year. Which type of algorithm would you use ?

Select one alternative:

- ☐ Clustering
- ☐ Classification
- ☐ Association
- ☒ Regression

- 16** What kind of algorithm assumes that the presence of a particular feature in a class is unrelated to the presence of any other feature

Select one alternative:

- ☒ Naive Bayes algorithm
- ☐ Polynomial regression
- ☐ Linear regression
- ☐ Logistic regression



17 What is the maximum number of hyperplanes one can use

Select one alternative:

- ☐ 10 dimensional
- ☐ n dimensional
- ☐ 2 dimensional
- ☒ 3 dimensional

18 Suppose you are given a data set of student complaints from OsloMets customer service center. The data set is labelled. You are now given a task to understand how angry or happy the students are in those complaints. What kind of algorithms would you use ?

Select one alternative:

- ☐ Regression
- ☐ Clustering
- ☒ Classification

19 Suppose you are given a data set of X ray images of Covid patients. The data set is not labelled and you do not have the opportunity to label it. You are now given the task to identify if the patient has covid or not. What kind of algorithm would you use ?

Select one alternative:

- ☒ Clustering
- ☐ Classification
- ☐ Regression



- 20** Suppose you operate a successful eCommerce store. You want to boost your sales and think you can encourage people to buy more based on their previous purchases. What kind of algorithm would you use to show customers what should they buy ?

Select one alternative:

☒ Association

☐ Clustering

☐ Classification

- 21** An equation that describes a relationship between two quantities that show a constant rate of change is called

Select one alternative:

☐ Support vector machine

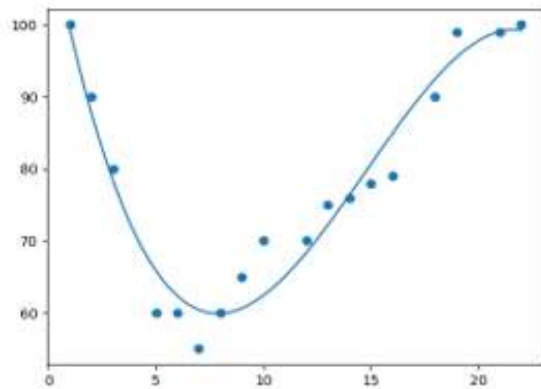
☒ Linear regression

☐ Naive Bayes

☐ Logistic regression



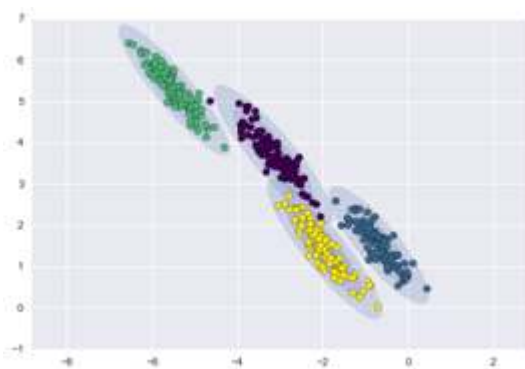
22 The following is an example of



Select one alternative:

- ☐ Linear regression
- ☒ Polynomial regression

23 The following image which shows a tight formation of data points which is usually produced by



Select one alternative:

- ☐ K-means algorithm
- ☐ Linear regression
- ☒ Gaussian algorithm



- 24** A recommendation system (e.g. used by social media companies) usually belongs to the following category of AI:

Select one alternative:

☐ Super A.I.

☒ Narrow A.I.

☐ General A.I.

- 25** Has there been any software which claims to have passed the Turing test ?

Select one alternative:

☒ Yes

☐ No

- 26** Suppose you are given the task to predict your income for the next year. You need data for the last 15 years and you only have data for the last 5 years. How will you get that missing data ?

Select one alternative:

☐ Data warehousing

☐ Data anonymization

☐ Feature engineering

☒ Synthetic data



27 In what kind of algorithms do we need to use data labeling ?

Select one alternative:

☐ Unsupervised learning

☐ Reinforcement learning

☒ Supervised learning

28 In Machine learning, Linear Regression falls within the category of:

Select one alternative:

☐ Unsupervised learning

☐ Recommender systems

☒ Supervised learning

☐ Reinforcement learning



- 29** Please look at the following image of cats. This question has no grade. Just take a break and see how cute they are



Was this useful?

Select one or more alternatives:

☐ I'm a dog person

☒ Never show this again

**30** Regression models are used with**Select one alternative:**

- ☐ Random data
- ☒ Continuous data
- ☐ None of the above

31 What is NOT valid for a hyperplane ?**Select one alternative:**

- ☐ They are boundaries that help classify data points
- ☐ Hyperplanes work with support vector machines
- ☒ We can only use maximum 2 hyperplanes for any number of features

32 Which statement is true about outliers ?**Select one alternative:**

- ☒ The nature of the problem determines how outliers are used
- ☐ Outliers should be part of the training data set but should not be present in the test data
- ☐ Outliers should be identified and removed from the data set
- ☐ Outliers should be part of the test data set but should not be present in the training data



- 33** The correlation between the number of years an employee has worked for a company and the salary of the employee is 0.75. What can be said about employee salary and years worked ?

Select one alternative:

- ☐ Individuals that have worked for the company the longest have lower salaries
- ☐ There is no relationship between salary and years worked
- ☒ Individuals that have worked for the company the longest have higher salaries
- ☐ The majority of employees have been with the company a long time

- 34** What is TRUE for a machine learning algorithm ?

Select one alternative:

- ☐ It is harder to train the first 90% than the remaining 10%
- ☐ None of the above.
- ☒ It is harder to train the remaining last 10% than the first 90%

- 35** "You may also like" or "recommended for you" kind of applications (used primarily in Amazon, Facebook etc) can be implemented by using algorithms such as

Select one alternative:

- ☐ Neural network algorithms
- ☒ Apriori algorithm
- ☐ K-Means algorithm



36 What kind of problem does this statement highlight in your data : Most facial recognition systems today use a higher proportion of white faces as training data (study by IBM in 2019)

Select one alternative:

☐ Clustered data

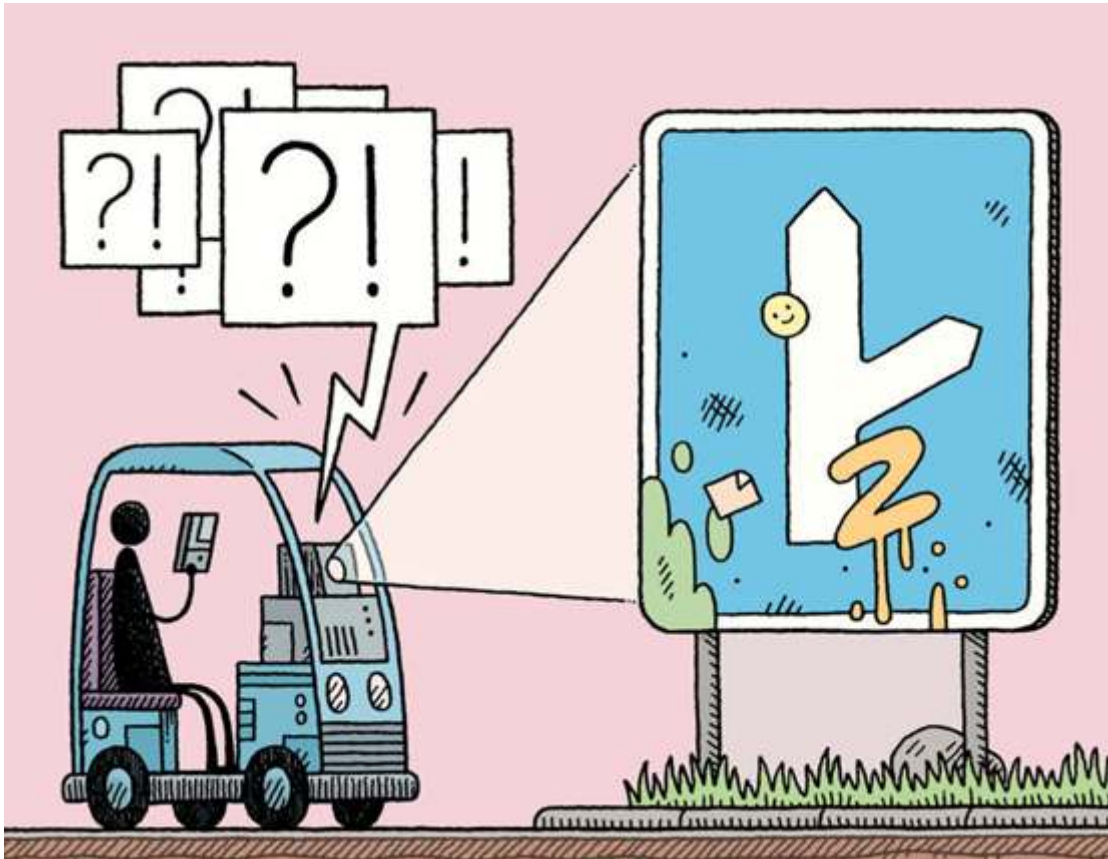
☒ Data Bias

☐ Unlabeled data

☐ None of the above



- 37 In the following image the self driving car came to an abrupt stop. What do you think went wrong ?



Select one alternative:

- ☐ The human took the floppy drive out of the car and the car cannot move
- ☒ A handful of stickers and graffiti have confused the car to misinterpret the sign
- ☐ Self driving cars have problems with blue color
- ☐ The smiley face picture on the board is interpreted as a human face and the car cannot move



- 38** If the software follows a logical series of steps to reach a conclusion, is easy to explain and the programmer has complete control over the code, then what kind of programming is it ?

Select one alternative:

- ☒ Conventional programming
- ☐ Artificial Intelligence programming

- 39** The major reason behind the increased use of Artificial Intelligence today is due to

Select one alternative:

- ☐ Availability of increased data
- ☐ Cloud computing
- ☐ Powerful processors
- ☐ Increased connectivity between devices
- ☒ All of the above



40 What is the preferred way to work with an A.I. algorithm ?

Select one alternative:

- ☒ Identify the problem -> prepare data -> choose algorithms -> train the algorithm -> run the algorithm
- ☐ Identify the problem -> choose algorithms -> run the algorithm -> prepare data -> train the algorithm -> export data to algorithms
- ☐ Identify the problem -> choose algorithms -> train the algorithm -> run the algorithm -> prepare data -> export data to algorithms
- ☐ All of the above