

Project Titles & Description



| Sno | Track | Domain | Project Title | Description | Dataset/Reference |
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| 1 | ADS | Hospitality | A Machine Learning Approach — Building a Hotel Recommendation Engine | <p>All online travel agencies are scrambling to meet the AI driven personalization standard set by Amazon and Netflix. In addition, the world of online travel has become a highly competitive space where brands try to capture our attention (and wallet) with recommending, comparing, matching and sharing.</p> <p>we aim to create the optimal hotel recommendations for Expedia's users that are searching for a hotel to book. We will model this problem as a multi-class classification problem and build SVM and decision tree in ensemble method to predict which "hotel cluster" the user is likely to book, given his (or her) search details.</p> | https://www.kaggle.com/c/expedia-hotel-recommendations/data |
| 2 | ADS | Human Resource | Predicting Attrition Risk Using Machine Learning Techniques | <p>Employee attrition, also known as employee turnover or staff churn, refers to the process of employees leaving an organization and being replaced by new hires. This can happen for a variety of reasons, such as dissatisfaction with the job, a better opportunity elsewhere, or personal circumstances.</p> <p>High attrition rates can be a problem for organizations, as they can lead to a loss of institutional knowledge and the need to invest time and resources in hiring and training new employees. This can also impact morale and productivity within the organization.</p> <p>There are many different machine learning algorithms that you could use for this purpose, such as decision trees, random forests, and logistic regression. You would choose the algorithm that best fits the data and your prediction objectives.</p> <p>Once the model is trained, you can use it to predict the attrition rate for individual employees or for the organization as a whole. This can help organizations identify potential issues and take steps to address them before they result in a high attrition rate.</p> | https://www.kaggle.com/datasets/prachi13/employeeattritionrate |
| 3 | ADS | Healthcare | Predicting Heart Failure Risk Using Machine Learning | <p>Heart failure, also known as congestive heart failure, is a condition in which the heart is unable to pump enough blood to meet the body's needs. This can lead to a range of symptoms, including shortness of breath, fatigue, and swelling in the legs and ankles. Heart failure can be caused by a variety of factors, such as high blood pressure, coronary artery disease, and diabetes. It can also be the result of damage to the heart from a heart attack or other conditions.</p> <p>There are many different machine learning algorithms that you could use for this purpose, such as decision trees, random forests, and logistic regression. You would choose the algorithm that best fits the data and your prediction objectives.</p> <p>Once the model is trained, you can use it to predict the risk of heart failure for individual patients. This can help healthcare providers identify patients at high risk for heart failure and take steps to prevent or mitigate the condition.</p> | https://www.kaggle.com/code/midouazerty/heart-failure-prediction/data?select=heart_failure_clinical_records_dataset.csv |

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| 4 | ADS | Education | Identifying Patterns and Trends in Campus Placement Data using Machine Learning | <p>Campus recruitment is a strategy for sourcing, engaging and hiring young talent for internship and entry-level positions. College recruiting is typically a tactic for medium- to large-sized companies with high-volume recruiting needs, but can range from small efforts (like working with university career centers to source potential candidates) to large-scale operations (like visiting a wide array of colleges and attending recruiting events throughout the spring and fall semester). Campus recruitment often involves working with university career services centers and attending career fairs to meet in-person with college students and recent graduates. Our solution revolves around the placement season of a Business School in India. Where it has various factors on candidates getting hired such as work experience, exam percentage etc., Finally it contains the status of recruitment and remuneration details.</p> | <p>https://www.kaggle.com/datasets/tejashvi14/engineering-placements-prediction</p> <p>https://www.kaggle.com/datasets/benroshan/factors-affecting-campus-placement</p> |
| 5 | ADS | Education | Autonomous-Tagging-Of-Stack-Overflow-Questions | <p>Information sharing platform have become very popular platform for question and answer sessions. Examples include Quora, StackOverflow, Reddit and OpenEDX. While the quantity of information available on these websites has increased many folds but there is no efficient way to classify data as such that is automated. Most such websites ask users to tag their queries which is not an intuitive way to ask questions. As users might not tag the problem properly which further leads to ambiguity in data. It would be useful to automate the process of tagging as the means to classify information in an efficient manner. A system that supports autonomous tagging can improve the user experience by clustering information into discrete common topics. The other benefit is that the user can be recommended queries related to his own problem which could help him find the answer in an efficient and effective manner. This project outlines a method for question and answer platforms that automatically allocates tags for a given query.</p> | <p>https://www.kaggle.com/datasets/stackoverflow/stacksample</p> |
| 6 | ADS | Banking | Predicting Personal Loan Approval Using Machine Learning: | <p>Personal loan approval prediction is the process of using machine learning algorithms to predict the likelihood that a personal loan application will be approved. This is often of interest to banks and other lending institutions, as it can help them optimize the loan approval process and reduce the risk of default.</p> <p>To predict personal loan approval using machine learning, you would need to gather data on past loan applications and the outcomes (i.e., approved or denied). This data might include information on the applicants' demographics, credit history, income, and other relevant factors. You would then use this data to train a machine learning model to predict the likelihood that a given loan application will be approved.</p> <p>Some common machine learning algorithms that may be used for this purpose include decision trees, random forests, and logistic regression. Once the model is trained, you can use it to predict the likelihood of loan approval for individual loan applications. This can help banks and other lending institutions make more informed lending decisions and reduce the risk of default.</p> | <p>https://www.kaggle.com/datasets/itsmesunil/bank-loan-modelling</p> |
| 7 | ADS | Communication | Optimizing Spam Filtering with Machine Learning | <p>Spam detection is the process of identifying unsolicited or unwanted electronic messages, typically through the use of machine learning algorithms. Spam messages can take many forms, including email, SMS, and social media messages, and are often used for malicious purposes, such as phishing attacks, scams, and spreading malware.</p> <p>To detect spam, machine learning algorithms analyze the content of electronic messages and identify patterns that may indicate spam. These patterns may include specific words or phrases, links to suspicious websites, or other indicators of spam-like behavior.</p> <p>Once the spam detection model is trained, it can be used to classify new messages as spam or not spam. This can help individuals and organizations protect themselves from spam and other forms of online abuse, and ensure that they only receive messages that are relevant and legitimate.</p> | <p>https://www.kaggle.com/datasets/uciml/sms-spam-collection-dataset</p> |

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| 8 | ADS | Retail | Walmart Store Sales Forecasting Using Machine Learning | <p>Walmart is a large multinational retail corporation that operates a chain of discount department stores and warehouse stores. The company was founded in 1962 and is headquartered in Bentonville, Arkansas. Walmart is known for offering low prices on a wide range of products, including groceries, clothing, electronics, home goods, and more.</p> <p>In addition to its physical stores, Walmart also operates an online store, which allows customers to shop online and have their purchases delivered to their homes or picked up at a nearby store. The company has a strong presence in the United States and has expanded internationally, with operations in 27 countries. Walmart is one of the largest retailers in the world and is a Fortune 500 company.</p> <p>Walmart Store Sales Forecasting is the process of using machine learning algorithms to predict future sales at Walmart stores. This can be useful for Walmart to optimize inventory management, forecast demand, and make informed business decisions.</p> | https://www.kaggle.com/competitions/walmart-recruiting-store-sales-forecasting/data |
| 9 | ADS | Retail | Analyze Customer Spending Habits using Machine Learning | <p>Customer spending habits refer to the patterns and trends in how customers spend their money. These habits can include how much money they spend, what they spend it on, and how frequently they make purchases. Understanding customer spending habits can be useful for businesses, as it can help them make informed decisions about how to run their operations and market their products.</p> <p>There are various ways to analyze customer spending habits, including collecting data on customers' purchases and creating visualize patterns in their spending. Businesses can use this information to identify trends in what customers are purchasing and to make decisions about what products to stock and how to market them. Understanding customer spending habits can also be useful for identifying potential areas for growth or improvement within a business. For example, if a business notices that a certain group of customers is spending a lot of money on a particular type of product, they may decide to focus more on that product and try to attract more customers who are interested in it.</p> | https://www.kaggle.com/datasets/thedevastator/analyzing-customer-spending-habits-to-improve-sa |
| 10 | ADS | Aviation | Identifying airline passenger satisfaction using machine learning | <p>Air passengers are individuals who travel by airplane. They may be traveling for a variety of reasons, such as for leisure or business. Air passengers typically book their flights through an airline or a travel agency and are required to follow certain rules and regulations, such as going through security screenings and adhering to baggage limits. There are different classes of air travel that passengers can choose from, such as economy, business, and first class. These classes typically offer different levels of comfort and amenities, with higher classes generally costing more money.</p> <p>Air travel is a common means of transportation for long distances, as it allows people to reach their destination faster than other modes of transportation. However, it can also be more expensive and have a larger environmental impact compared to other options. Air passenger satisfaction refers to the level of happiness and contentment that passengers feel with their air travel experience. Factors that can impact air passenger satisfaction include the quality of the flight, the service provided by the airline staff, the comfort of the seating, and the availability of amenities such as in-flight entertainment and food. Improving air passenger satisfaction is important for airlines and other organizations involved in the air travel industry, as satisfied passengers are more likely to return and recommend the service to others. This can help to increase customer loyalty and drive business growth. Machine learning can be used to analyze air passenger satisfaction by using algorithms to identify patterns and trends in data about passengers' experiences.</p> | https://www.kaggle.com/datasets/teejmahal20/airline-passenger-satisfaction |