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"metadata": {}, "source": [ "Business Understanding\n", "The company is expanding into new
industries by acquiring and operating airplanes for both commercial and private ventures. Since
this is the first time the company is venturing into this operation, it's crucial to assess the potential
risks associated with aircraft operations. We will evaluate these risks based on historical aviation
accident data in the United States and international waters, covering the period from 1962 to
2023.\n", "\n", "Potential Causes of Aircraft Accidents are :\n", "\n", "Loss of control\n",
"Weather hazards\n", "Fire risks\n", "Runway incursions\n", "Turbulence\n", "Pilot fatigue\n",
"Electrical issues, among others\n", "Objectives\n", "In our analysis, we aim to:\n", "\n",
"1. Identify aircraft models with the lowest accident risks by assessing the credibility of the
aircraft models and the reputation of the aircraft brands.\n", "\n", "2. Examine how factors like
weather conditions and aircraft make,model,,number of engines contribute to the frequency of
accidents.\n", "\n", "3. Investigate accident trends over time to determine whether accident rates
have decreased or improved over the years.\n", "\n", "Approach\n", "We will employ linear
regression analysis to predict and visualize trends in accident data over time. Based on the
analysis, we will select the aircraft model that has the lowest risk of accidents over the years.\n",
"\n", "This will guide the company in making informed decisions about which aircraft to include
in its expanding portfolio.\n", "\n", "\n", "\n", "\n", "\n" ] }, { "cell_type": "markdown", "id":
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UNDERSTANDING \n", "To analyze the aviation data, we first need to load and explore the
dataset. The following steps will help in the data preparation and exploration phase" ] }, {
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