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The Department of Aviation Management and Flight currently uses 5 Cessna 172R G1000 aircraft for intermediate flight training. These aircraft log 64 flight data variables at a 1hz sample rate; with 5 aircraft running for 5 years there are over 2 billion discrete data points. This data has been used to analyze different flight safety characteristics including loss of control, hard landings, and abnormal maneuvers.

   The use of machine learning with time-series data for predictive analytics is currently being researched. Loss of control events stemming from unstabilized approaches are currently the leading cause of fatal accidents in our region. Using neural networks to discover relationships between different flight variables on approach shows promise towards predicting approach quality and may help avoid loss of control events.