



# Project 4 Proposal - Data Detectives

4/11/24

Scott Arterbury

Randy Esser

Brittany Jones

Ramkumar Jothis

## Overview

Team AEJJ is seeking to discover relationships between U.S. Gross Domestic Product (GDP) and overall economic health. Can machine learning predict a recession, with better than 75% accuracy, by analyzing historical GDP data?

## Background

The generally accepted definition of a recession in the U.S., [according to Forbes](#), is when GDP shrinks in two consecutive quarters. The National Bureau of Economic Research traditionally follows a more vague definition:

*"A recession involves a significant decline in economic activity that is spread across the economy and lasts more than a few months."*

[Business Cycle Dating](#)

While GDP results typically define recession conditions, we want to know if ML can detect trends in quarterly results and predict a recession ahead of time.

## Data Source

GDP data (1929-2023)

Source: [Bureau of Economic Analysis \(U.S. Dept. of Commerce\)](#)