

Project Proposal

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1 Introduction

An initial price offering (IPO) is the process by which a company issues shares of stock to the general public through the stock market. IPO performance can vary wildly based on the company - while some IPOs succeed greatly, like Snowflake, whose price more than doubled on the first day of trading, others can not do so well, like Uber, whose price dropped more than 7% on the first day of trading. We propose a project that analyzes which factors will lead to day one IPO success to identify which companies' IPOs are worth investing in.

2 Problem Motivation

The question we are focused on answering is determining what percent increase or decrease a stock will have on day one of the IPO based on various factors related to company fundamentals and time variables. Investing in a company at IPO price can be an extremely lucrative investment, especially considering how volatile prices can be on day one of trading. If we succeed, our models will be able to identify promising companies and make lots of money through investing in these IPOs. Given the size and breadth of our dataset, along with our impressive arsenal of data analysis techniques, we are confident that we will find predictive covariates for IPO price.

3 Dataset

The dataset we are going to analyze summarizes various factors for over 3,000 stocks. We aim to find any potential relationships between day one IPO success (as defined by percentage difference between day one opening price and day one closing price) and such relevant factors as year, day of the week, industry/sector, and the opening day price. The opening day price is of particular interest because it illustrates the company's confidence, and likely reflects how big the company is when it first becomes public, both of which can impact its success on day one. Other factors, such as day of the week, might not seem as relevant, but they can have some psychological impact based on work fatigue if a company opens towards the end of the week as opposed to the beginning. Although many organizations have already analyzed factors that influence stock success, we seek to look at the seemingly irrelevant factors to find potential relationships to predict success.

Link to Dataset: <https://www.kaggle.com/proselotis/financial-ipo-data>