# Hackathon Challenge

**Problem Statement1**

Emotion Identification from text using NLP (Natural Language Processing)

**Descriptions**

Hackathon has presented an opportunity to interact with the machine learning community to use learning for fun and practice. Additional motivation is that machine algorithms can design features better and faster than humans can. And, classify the emotions of tweets.

You are asked to label tweets with six values:  neutral, worry, sadness, happiness, love, anger. Obstacles like sentence negation, sarcasm, terseness, language ambiguity, and many others make this task very challenging.

**Evaluation**

Submissions are scored based on their accuracy of predicting which of the six classes should be assigned to each tweet.

**Practice Skills**

Multi-classification

Python and R basics

**Example**

tweet -  the tip of my finger hurts

emotion - sadness

tweet - @author Thanks for following!

emotion - happiness

tweet - shoes are so lovely

emotion - love

tweet - @author We are working

emotion – neutral

**Problem Statement2**

Identifying prominent topics/keywords along with their related review/opinion/feedback from each review using the dependency tree.

**Descriptions**

LDA is wildly used technique for topics/keywords extraction but here in this challenge we would like to explore context free grammar with the help of dependency tree and extract topics/keywords with their opinions words.

**Evaluation**

Submissions are scored based on relativeness of extracted topics/keywords.

**Practice Skills**

NLP, CFG

Python and R basics

**Example**

text - Staff was awesome, Doctor incredible.

Staff - awesome

Doctor - incredible

text - very clear instructions

instructions - very clear

text - Beautiful office surroundings & wonderful receptionists

office surroundings - Beautiful

receptionists - wonderful

**About Binary Fountain**

Binary Fountain is the leading provider of patient experience and reputation management software. We help our clients to truly learn from and take action on patient feedback. Binary Health Analytics, our innovative Software-as-a-Service (SaaS) platform, mines patient feedback from social media, surveys, web commentary and third party data sources to equip our clients with the actionable insights needed to improve patient satisfaction and loyalty, increase engagement, and drive sustainable bottom-line results. Binary Star Ratings, transforms patient feedback from surveys into patient reviews and testimonials published directly onto our client’s directory pages allowing them to improve SEO, drive more traffic to their webpages, and demonstrate their commitment to transparency ultimately allowing patients to make more informed decisions when choosing a healthcare provider or facility.

Leading organizations, large and small, rely on Binary Fountain to understand patient experience, drive comprehensive operational intelligence throughout the organization and engage consumers with innovative reputation management capabilities.