# PROJECT PROGRESS REPORT

**February 11, 2019**

Jinwen Luo
AQM GSE&IS UCLA

# Contents

## 0.1 Project Roadmap

1. *The main task of the project*
2. the first step of the project
3. the second step of the project
4. the third step of the project
5. and then
6. My paper got published!

## 0.2 Project Updates

1. *Update when anything related to the roadmap is addressed*
2. Dec,2018. Completed the step2
3. Nov,2018. Completed the step1
4. Oct,2018. Start the project

## 0.3 Results

*Main Results related to the purpose of the research or things to disccuss*

## 0.4 Things I Need Help with and my Plan to Resolve

1. I need feedback on my project
2. I'm not sure how to start writing a paper.
3. I have an idea but IâĂŹm stuck
4. Can I park at Rellis?

## 0.5 Process Diary

```
import numpy as np

def incmatrix(genl1,genl2):
    m = len(genl1)
    n = len(genl2)
    M = None #to become the incidence matrix
    VT = np.zeros((n*m,1), int)  #dummy variable

    #compute the bitwise xor matrix
    M1 = bitxormatrix(genl1)
    M2 = np.triu(bitxormatrix(genl2),1)

    for i in range(m-1):
        for j in range(i+1, m):
            [r,c] = np.where(M2 == M1[i,j])
            for k in range(len(r)):
                VT[(i)*n + r[k]] = 1;
                VT[(i)*n + c[k]] = 1;
                VT[(j)*n + r[k]] = 1;
                VT[(j)*n + c[k]] = 1;

                if M is None:
                    M = np.copy(VT)
                else:
                    M = np.concatenate((M, VT), 1)

                VT = np.zeros((n*m,1), int)

    return M
```

**Listing 1:** Python example

# References