**Monash / La Trobe University Lecture**

**[Individual Task 1: Naïve Bayes]**

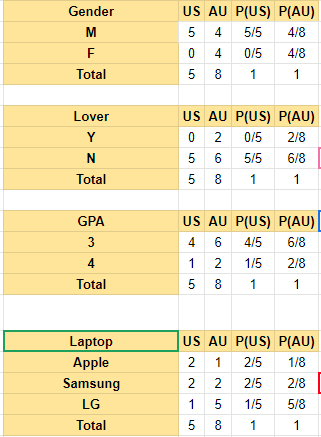
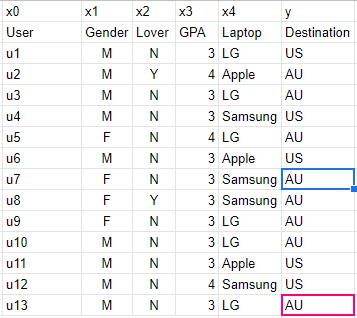
**Gachon University**

**Software Dept.**

**Seungsoo Lee**

**[Dataset]**

**-Training Set**



**Q1.**

|  |
| --- |
| P(US | F, Y, 4,Apple)=0  P(AU | F, Y, 4,Apple)=more than P(US | F, Y, 4,Apple)  P(US | F, Y, 4,Apple)=0 < P(AU | F, Y, 4,Apple)  Result = P(AU) |

A

**Q2. Estimate which nation will be choosed: M,N,3,Apple**

|  |
| --- |
| US:  P(M | US) \* P(N | US) \* P(3 | US) \* P(Apple | US) \* P(US) = ***5/5\*5/5\*4/5\*2/5\*5/13 = 8/65***  AU:  P(M | AU) \* P(N | AU) \* P(3 | AU) \* P(Apple | AU) \* P(AU) = ***4/8\*6/8\*6/8\*1/8\*8/13=9/416*** |

Result: US

**Q3. Estimate which nation will be choosed: M,Y,4,LG**

|  |
| --- |
| US:  P(M | US) \* P(Y | US) \* P(4 | US) \* P(LG | US) \* P(US) = ***5/5 \* 0/5 \* 1/5 \* 1/5 \* 5/13 = 0***  AU:  P(M | AU) \* P(Y | AU) \* P(4 | AU) \* P(LG | AU) \* P(AU) = ***4/8 \* 2/8 \* 2/8 \* 5/8 \* 8/13 = 5/416*** |

Result: AU

**Q4. Estimate which nation will be choosed: M,Y,3,Samsung**

|  |
| --- |
| US:  P(M | US) \* P(Y | US) \* P(3 | US) \* P(Samsung | US) \* P(US) = ***5/5\*0/5\*4/5\*2/5 \*5/13= 0***  AU:  P(M | AU) \* P(Y | AU) \* P(3 | AU) \* P(Samsung | AU) \* P(AU) = ***4/8\*2/8\*6/8\*2/8\*8/13=3/208*** |

Result: AU

