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Python for Analytics: Week 8

Self-Study Discussion 8.2: Decision Analysis Case Study

- David Tan, a second-year MBA student at NUS, is in a very enviable position. He has three lucrative career paths:

Option 1:

An offer from a top management consulting firm (\$70,000 for the first year)

Option 2:

Startup idea to open his own restaurant, **Dallas Restaurant and Bar**

Option 3:

An unusual partnership opportunity with his aunt, a restaurateur

- The lifestyle of management consultant is taxing
- Much of the travel is rather routine to affect his family life
- While David is very energetic and motivated, enjoying hard work, he is also committed to maintaining a healthy personal life as well

Option 2: David's Estimates for Dallas Restaurant and Bar

- Cost of running the restaurant

Labor costs	\$5,040 to \$6,860 (uniformly distributed)
Rent, utilities and other fixed costs	\$4000 (fixed)
Cost of food	\$12/meal served

Option 2: David's Estimates for Dallas Restaurant and Bar

- Restaurant revenue
 - Number of meals sold per month obeys a normal distribution
 - Price of prix fixe meal

Scenario	Prix Fixe Meal Price	Probability
Very healthy market	\$20.00	25%
Healthy market	\$18.50	35%
Not so healthy market	\$16.50	30%
Unhealthy market	\$15.00	10%

- **Terms of the partnership offer**
 - David's aunt would guarantee him a monthly salary of at least \$3,500
 - All earnings between \$3,500 and \$9,000 would go to David
 - 90% of all earnings in excess of \$9,000 would go to his aunt
- **Factor to be considered**
 - To maintain a reasonable lifestyle, David needs \$5,000 / month

- Sensitivity Analysis
 - What if the SD of monthly demand can be reduced to 500?
 - What if <add other scenarios>...



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