Dianna Ulm Data Skill List

Data Science & Data Analyst Skills:

FORMALLY EDUCATED IN CRISP-DM data mining Process-

CROSS INDUSTRY STANDARD PROCESS FOR DATA MINING (Iterations from Business understanding, data understanding, data preparation, modeling, evaluation and deployment.)

- Data Extraction (Extract Knowledge), data collection and cleansing
- Data Mining Process, Data Analytic
- Ability to decompose data analytic problems & map to tasks and tools
- Data Science Solution Concepts, fundamental principles
- Business Strategy, evaluating business problems, data driven decision making
- Visual Model Performance, execute results from data mining
- Generate expected profit calculation (Able to communicate to stakeholders)
- Expected Value to Frame Classifier Evaluation
- Estimation of Probabilities
- Profit Curves
- Cumulative Response Curves
- Lift Curves
- ROC Curves
- Ranking and Classification Analytic Framework
- Bias, Variance and Ensemble methods
- Meta data & Data-driven solutions

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Data Modeling, Supervised and Unsupervised:

1. ***Predictive Modeling***
2. ***Supervised Segmentation***
3. ***Support Vector Machines***
4. ***Evidence & Probabilities Modeling concepts***
5. ***Classification and Probability Estimator***
6. ***Regression Modeling***
7. ***Similarity Matching Modeling***
8. ***Clustering Modeling***
9. ***Co-occurrence Grouping Modeling***
10. ***Profiling Modeling***
11. ***Link Prediction Modeling***
12. ***Data Reduction Modeling***
13. ***Casual Modeling***
14. ***Nearest Neighbor Reasoning (K Nearest Neighbor)***
15. ***Bayesian Methodology***

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Statistical Concepts:

- Statistical fundamental understanding
- Mathematical Operations, denote functions and communicate data interchangeably between statistics and data science
- Organization and Graphing (Able to use statistical procedures to classify and summarize data)
- Description of Distribution (Adequate summarization of data such as shape, variation, spread, and central tendency)
- Knowledge of Correlation analysis, regression analysis, sampling probability analysis
- Descriptive Analytics: Collect data using descriptive stats to describe data collected. (formulate and test hypothesis)
- Inferential Statistics: Make inferences of populations based on a sample selected based on probability (sampling & probability)
- Hypothesis Testing
- SPSS system and Python Graphing
- One Way ANOVA Analysis