CRESTA FEATURES PLANNED AHEAD

Sr. No.	Base Minimum Value Product Use Case. (MVP)	Use Case No	Use cases	ML Algorithms	Will be implemented in Cresta version
1	(1) Select a project. (2) Select Metric for prediction. (3) Select Trend. Result : (1) Defect Metric is predicted for Future (2) Statistical UCL and LCL are selected (3) Predictions are given for various algorithms.	BoA 1	Predict early in the lifecycle. This is the base use case. (1) Future Metric data should be displayed in a table.(2)Future Metric data should be displayed on mouse hoover.	Linear Regression, Support Vector Regression, Bayesian Regression	Cresta 1.0
2		BoA 1A	Defect acceptance rates: Defect Acceptance rate metric will be added to BoA 1 use case drop down.	Linear Regression, Support Vector Regression, Bayesian Regression	Cresta 1.0
3		BoA 1B	Defect deferral rates (how much) and frequencies (how often). (1) Defect Deferral Rate metric will be a part of BoA 1 use case. (2) Frequency of Deferral will be displayed on mouse hoover and in a table. This is also a part of BoA 2 use case.	Linear Regression, Support Vector Regression, Bayesian Regression	Cresta 1.0
		BoA 1C	Predicted All Defects vs. Actual All Defects: (1) Apart from the past data and the predicted data we need to display actual data line graph for the metric selected.	Linear Regression, Support Vector Regression, Bayesian Regression	Cresta 1.0
		BoA 1D	Predicted Functional Defects vs. Actual Functional Defects.	Support Vector Machines, Naive Bayes, Logistic Regression, Decision Tree, Random Forest	Cresta 1.0
4		HQ 1	Low Data Use Case : Prediction of a new project metrics using co-relation data of similar projects.	Linear Regression, Support Vector Regression, Bayesian Regression	Cresta 2.0
5		HQ 2	Low Data Use case : Prediction of metrics with daily data streaming.	Linear Regression, Support Vector Regression, Bayesian Regression	Cresta 2.0
6	Graphic Representation of Accuracy and more than one future releases.	NTT1	Prediction Graphs to include the Accuracy graph.		Cresta 2.0
		NTT2	Predictions to be made over a finite set of releases (or X axis parameters)		Cresta 2.0
7	Formal ETL scripts to be published.	NTT3	ETL scripts and related system settings to be in formal API forms. These API's should be exposed and relevant documentation should be published.		Cresta 2.0
8	Configuration and Setup Pages	NTT4	Setup Pages and Config weightages.		Cresta 2.0
9	Numeric Statistics with ETL back-end	NTT5	Generate basic statistical dashboard for a graphic Matrix.		Cresta 2.0

Optimization

Sr. No.	Base Minimum Value Product Use Case. (MVP)	Use Case No	Use cases	ML Algorithms	Will be implemented in Cresta version
1	(1) Select a project. (2) Select the module under consideration. Result : (1) Classify Test cases and segregate the Test cases according to various categories.	BoA 2	Identify testing overlaps: The classification of test cases done in base use case will identify overlaps. (1) These overlaps should be presented. (2) UI should aid correction of overlapping test cases.	Support Vector Machines, Naive Bayes, Logistic Regression, Decision Tree, Random Forest, K- Nearest Neighbours, K-Means, Dimensionality Reduction	Cresta 1.0
2		BoA 2A	Look to reduce testing efforts across duplicating teams. (1) The user should be able to select multiple teams and the test cases that they are using. (2) Based on the base use case we should be able to locate same (or similar) test cases being executed multiple times by various teams.	Support Vector Machines, Naive Bayes, Logistic Regression, Decision Tree, Random Forest, K- Nearest Neighbours, K-Means, Dimensionality Reduction	Cresta 1.0

Coverage

Sr. No.	Base Minimum Value Product Use Case. (MVP)	Use Case No	Use cases	ML Algorithms	Will be implemented in Cresta version
1	From Historical and predicted data find out which module is defective. Define a configuration page to define UCL and LCL of defective modules.	BoA 3	Identifying most defective application and target test according to problematic areas. (1) Use the base use case to predict the most defective module. (2) Based on Test Cases Data identify which modules have adequate test case coverage. Requirements coverage to be considered.	Linear Regression, Support Vector Regression, Bayesian Regression	Cresta 1.0
2		BoA 3A	Allocate testing resources effectively (focus on problematic areas vs. regression of all). (1) Identify allocated resources. (2) From historical data predict if these resources are sufficient.	Linear Regression, Support Vector Regression, Bayesian Regression	Cresta 2.0
3		BoA 3B	Target test coverage to higher risk applications. (1) Identify high risk applications from defect leakage data and requirements document. (2) Identify if test cases have adequate coverage for this data (3) Identify if sufficient resources have been allocated.	Linear Regression, Support Vector Regression, Bayesian Regression	Cresta 2.0

Compliance

Sr. No.	Base Minimum Value Product Use Case. (MVP)	Use Case No	Use cases	ML Algorithms	Will be implemented in Cresta version
1	Compliance Testing for Testing results.				Under discussion.

Adaptive Planning

Sr. No.	Base Minimum Value Product Use Case. (MVP)	Use Case No	Use cases	ML Algorithms	Remarks	Will be implemented in Cresta version
1	Adaptive Planning Premise : Project Quality and Program Efficiency will be considered for this use case. Projects whose quality is critical will be identified. Programs which are critical will also be identified. The intersection set of these two items will be displayed in a	BoA 4	Adjust test planning based on above analysis.	Not Applicable	Details not clear from BoA.	Cresta 2.0
2		BoA 4A	Centralized reporting to disseminate the above analysis to leadership team.	Not Applicable	Reports details not clear. Conflicts with existing ERP, CRM and SAP reports.	Cresta 2.0