**INTRODUCTIONT/TBUSINESSTPROBLEM**

ThisTessayTdetailsTtheTdataTpreparationTandTmodelingTworkTthatTusesTaTpubliclyTavailableTdatasetTonTvehicleTaccidentsTregisteredTbyTtheTSeattleTCityTDepartmentTofTTransportation.TThisTworkT benefitsTtheTAmericanTpublicTbyTidentifyingTthoseTfactorsTconduciveTtoTvariousTtypesTofTtrafficT incidentsTandTusingTthisTinformationTtoTminimizeTthisTrisk.

**INTRODUCTIONT/TBUSINESSTPROBLEM**

InTpredictingTtheTtargetTvariableTofTaccidentTseverity,TthereTareT37TkeyTinputTvariablesTtoTbeT assessedTforTtheirTvalue.TThoseTvariablesTandTvalue-addingTdescriptorsTareTsummarizedTbelow:

1. XTandTYTappearTtoTbeTco-ordinates,TfocusedTonToneTparticularTarea
2. ObjectTIDTmayTsuggestTwhatTisTinvolvedTinTincidentT-Tit'sTaTuniqueTidentifier.T
3. InckeyTisTuniqueTkeyTforTincident.TLIKELYTUNINSIGHTFUL,TSINCETIT"STATCLASSIFIER.
4. IntkeyTisTuniqueTkeyTforTintersectionTwhereTincidentThappens.T
5. ColdetkeyTcorrespondsTtoTcollisionTdetail
6. SeglaneTandTCrosswalkThaveTkeysTreflectingTwhereTincidentThappened
7. HitTParkedTCarTreflectsTwhetherTthisThappened
8. CollisonTcodeTandTdescriptionTgivenTbyTStateTDeptTofTTransportation
9. WhetherTspeedingTwasTfactorTandTwhetherTPedestrianTRightTofTWayTWasTNotTGranted
10. LightingTandTroadTconditions
11. TypeTofTJunction,TwhetherTorTnotTdriverTwasTDUI
12. WhetherTinattentionTorTDUITwasTaTleadingTfactor
13. DateTandTtimeTofTincidentTwhetherTcollisionTwasTdueTtoTlackTofTattention