DEVELOPMENT OF FREEWAY CRASH PREDICTION MODELS USING DISAGGREGATE DATA: EFFECTS OF FLOW STATE INFORMATION FROM DIFFERENT SOURCES AND DATA CORRELATION

A Dissertation

Presented to

the faculty of the School of Engineering and Applied Science

University of Virginia

in partial fulfillment of the requirements for the degree

Doctor of Philosophy

by

Nancy Dutta

May 2019

APPROVAL SHEET

This Dissertation is submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy

Author Signature:

This Dissertation has been read and approved by the examining committe	эе:
Advisor: Michael D. Fontaine	
Committee Member: Brian L. Smith	
Committee Member: <u>T. Donna Chen</u>	
Committee Member: Byungkyu (Brian) Park	

Accepted for the School of Engineering and Applied Science:

Committee Member: _____

Committee Member: James Lambert

Craig H. Benson, School of Engineering and Applied Science

COB

May 2019