TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

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The text of Chapter 4, in full, is based on the material as it appears in: N. Rasiwasia and N. Vasconcelos, *'Scene Classification with Low-dimensional Semantic Spaces and Weak Supervision'*, IEEE Conference on Computer Vision and Pattern Recognition, pp. 1-6, Anchorage, June 2008. The dissertation author was a primary researcher and an author of the cited material.

The text of Chapter 5, in part, is based on the material as it appears in: N. Rasiwasia, J. Costa Pereira, E. Coviello, G. Doyle, G.R.G. Lanckriet, R. Levy and N. Vasconcelos, *'A New Approach to Cross-Modal Multimedia Retrieval'*, ACM

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The text of Chapter 7, in full, is based on the material as it appears in: N. Rasiwasia and N. Vasconcelos, *'Holistic Context Models for Visual Recognition'*, Accepted to appear in IEEE Transactions on Pattern Analysis and Machine Intelligence, and N. Rasiwasia and N. Vasconcelos, *'Generative Models for Image Classification'*, In preparation for IEEE Transactions on Pattern Analysis and Machine Intelligence. The dissertation author was a primary researcher and an author of the cited material.

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