MANIFOLD DATA MINING HELPS
BUSINESSES GROW MORE EFFECTIVELY

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Abstract. This note introduces the research and development capacity of a data mining leader in Canada–Manifold Data Mining Inc. (Manifold)–and its collaboration with academic community.

Manifold Data Mining Inc. ("Manifold") is a Canadian company located in Toronto. Manifold specializes in fusing geographic, demographic, consumer spending, shopping behaviour, product and media usage, lifestyle, psychographics and public health data to create a database that describes consumers and their behaviours at the neighbourhood level in a unified way. Manifold's data products are widely used by municipal governments and hospitals for economic development; universities for marketing programs; banks, insurers, and telecom companies for targeted marketing; manufacturers for product development; and retailers for trade area analysis and network optimization. Consumer geographic, demographic, lifestyle and attitude, product and media usage, and behavioural data can help companies understand better who their customers are, where they live, how much they spend on different items, where they shop and which channels they use to gather product and service information. Based on customer insights, companies can tailor their products and services to different segments of consumers; target their customers more precisely; and engage with them more effectively. For example, upon learning that their most valuable customers are seniors with high income, live in specific neighbourhoods, and actively read daily newspapers, a pet store in Toronto introduced a senior friendly delivery service and placed promotions in the section of a newspaper read by a high percentage of these seniors. This strategically targeted promotion increased the pet store's sales by 60%. For small and medium size companies Manifold provides data mining services and often functions as their analytics back office. For example, Manifold helped the Canadian Red Cross Society profile their donors, and built a predictive model to estimate which lapsed donors will likely return when Red Cross re-engages them. Based on Manifold's propensity score, the Canadian Red Cross increased their response rate by 53% and their average donation amount by 104% Manifold's data mining services also include: mapping, customer profiling, trade area analysis, predictive modeling, customer

segmentation, risk analysis and fraud detection. Manifold has developed a powerful online analytic tool (www.polarisintelligence.com) that enables users to map and profile their customers; perform trade area analysis; build predictive models; and cluster customers into different groups. Polaris analytics requires only a fraction of the time needed to perform custom analytics. Moreover, it drastically reduces the user's cost from licensing data and software, and hiring professional staff. Manifold has been actively pursuing innovation of their data mining technologies and expanding their offering of data products and services. Jointly with Professor Aijun An and Professor Jianhong Wu at York University, Manifold has been developing "An Online Integrated Health Risk Assessment Tool" and participating in the research project "Advanced Disaster, Emergency and Rapid Response Simulation". Both projects are endorsed and supported by the *Natural Sciences and Engineering Research Council of Canada (NSERC)*. More information can be obtained by contacting Michelle Fernandes at mfernandes@manifolddatamining.com.

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