Embracing Uncertainty: Applied Machine Learning Comes of Age

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Abstract. Over the last decade the number of deployed applications of machine learning has grown rapidly, with examples in domains ranging from recommendation systems and web search, to spam filters and voice recognition. Most recently, the Kinect 3D full-body motion sensor, which relies crucially on machine learning, has become the fastest-selling consumer electronics device in history. Developments such as the advent of widespread internet connectivity, with its centralisation of data storage, as well as new algorithms for computationally efficient probabilistic inference, will create many new opportunities for machine learning over the coming years. The talk will be illustrated with tutorial examples, live demonstrations, and real-world case studies.