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**Topic: Doing Deep Learning – the Hype and the Reality**

**Abstract:**

Almost daily, popular media and scientific publications report successful applications of deep learning to a wide range of problems. The current buzz might lead you to believe that deep learning has some near-magical capability to discover patterns in data, without any requirement for human analysis or judgment.

This paper will describe an ongoing project applying deep learning (specifically, convolutional neural networks) to a relatively straightforward image discrimination task. I will discuss the research problem, the various stages of my analysis, and my results thus far. My goal is to illustrate what it is like to actually “do” deep learning and to highlight both the power of the technique and the obstacles that can arise during the process. My message is that while deep learning is indeed a powerful tool, applying it successfully can be more difficult than one would guess from the enthusiasm in the literature.

**Bio:**

Sally E. Goldin earned a B.A. and M.A. from Brown University and an M.S. and Ph.D. from Carnegie-Mellon University. After two years as an Associate Computer Scientist at the renowned Rand Corporation, she moved from research to industry, where she worked as a consulting software architect, developer and team leader for both large and small companies in the U.S., as well as running her own start up. In 2003 she joined the Computer Engineering Department at KMUTT, where she supervises undergraduate and graduate research and teaches a variety of software-related courses. Her research interests include geospatial computing, software engineering tools, software cognition, and software engineering ethics.