

Monday, November 18 at 3pm in Boehm 262
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Title: Back for an ENCORE

Abstract: Big data is all around us. Whether it's your personal cloud data or information behind Maps, Google stores exabytes (billions of GBs) of data in their data stores. The average hospital generates 50 petabytes (millions of GBs) annually. All industries face the same data problems, namely that it is expensive to move, store, and protect. The computer science concepts at the heart of these issues are compression and encryption. Compression is concerned with making data smaller, and encryption is the process of transforming data into a form that is readable for some and undiscernible for others. There are many ways to perform each process individually, but we introduce the ENCORE algorithm which performs both compression and encryption simultaneously in a way more efficient than performing them in succession. We work from the ground up, assuming no prior knowledge on either topic