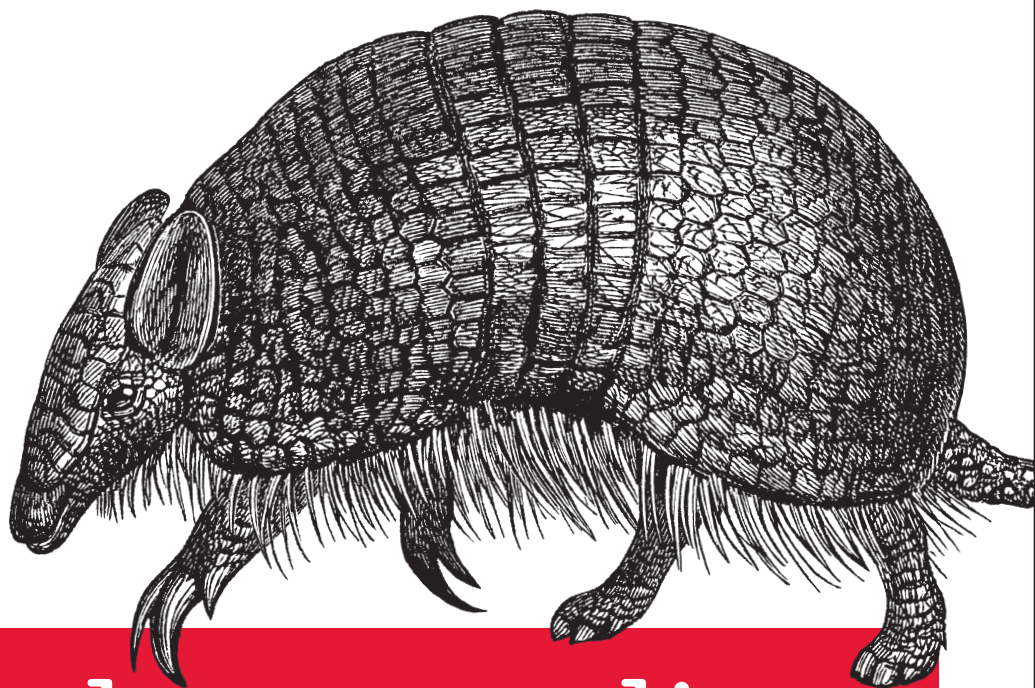# Understanding Compression

DATA COMPRESSION FOR MODERN DEVELOPERS

Colt McAnlis & Aleks Haecky

Understanding Compression

If you want to attract and retain users in the booming mobile services market, you need a quick-loading app that won't churn through their data plans. The key is to compress multimedia and other data into smaller files, but finding the right method is tricky. This witty book helps you understand how data compression algorithms work—in theory and practice—so you can choose the best solution among all the available compression tools.

With tables, diagrams, games, *and as little math as possible*, authors Colton McAnlis and Aleks Haecky neatly explain the fundamentals. Learn how compressed files are better, cheaper, and faster to distribute and consume, and how they'll give you a competitive edge.

- Learn why compression has become crucial as data production continues to skyrocket
- Know your data, circumstances, and algorithm options when choosing compression tools
- Explore variable-length codes, statistical compression, arithmetic numerical coding, dictionary encodings, and context modeling
- Examine tradeoffs between file size and quality when choosing image compressors
- Learn ways to compress client- and server-generated data objects
- Meet the inventors and visionaries who created data compression algorithms

Colt McAnlis is a Developer Advocate at Google focusing on games, compression, and performance. He's been an Adjunct Professor at SMU Guildhall, as well as a Udacity instructor.

Aleks Haecky is a Developer Advocate, Training Developer, and Writer at Google. He's worked on performance, documentation, and behind the scenes at Udacity and the Google Developer Channel.

"Compression is all about the most compact representation of data. First, we're going to talk about buckets. Then, we'll introduce you to this rebel named Claude Shannon, who pretty much ruined our life while simultaneously creating everything important that you love about computers. Finally, we'll reveal the one essential thing you need to know about data compression."

—from Chapter One

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