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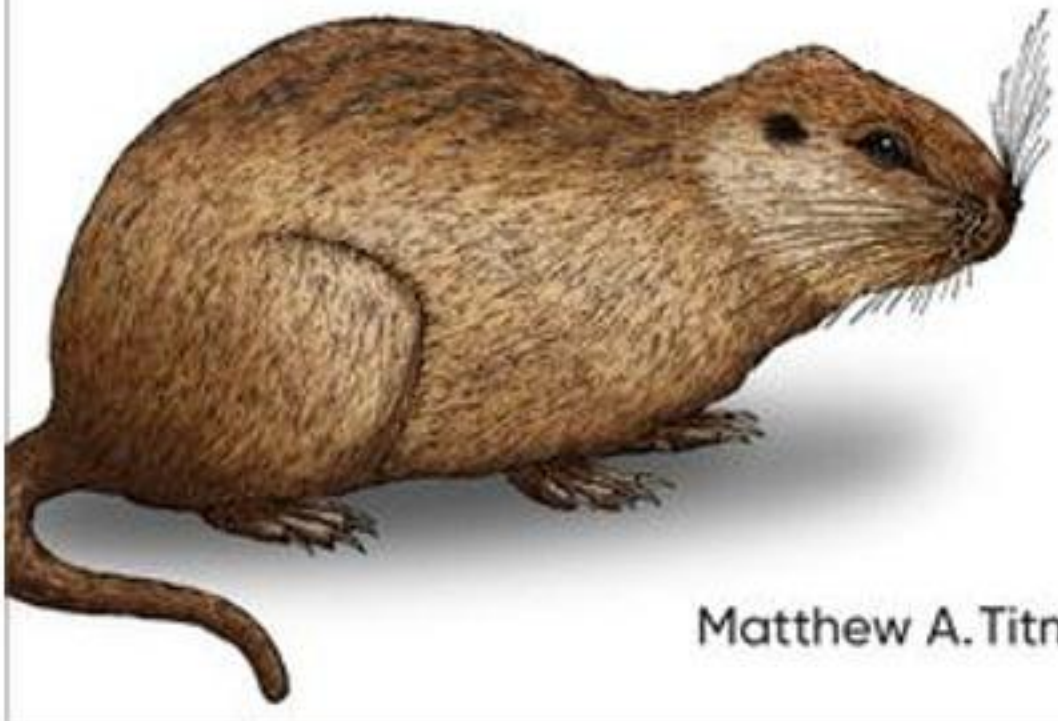
Cloud Native Go

Building Reliable Services in Unreliable Environments



Matthew A. Titmus

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About the Author

Matthew A. Titmus is a veteran of the software development industry. Since teaching himself to build virtual worlds in LPC, he's earned a surprisingly relevant degree in molecular biology, written tools to analyze terabyte-sized datasets at a high energy physics laboratory, developed an early web development framework from scratch, wielded distributed computing techniques to analyze cancer genomes, and pioneered machine learning techniques for linked data.

He was an early adopter and advocate of both cloud native technologies in general and the Go language in particular. For the past four years he has specialized in helping companies migrate monolithic applications into a containerized, cloud native world, allowing them to transform the way their services are developed, deployed, and managed. He is passionate about what it takes to make a system production quality, and has spent a lot of time thinking about and implementing strategies for observing and orchestrating distributed systems.

Matthew lives on Long Island with the world's most patient woman, to whom he is lucky to be married, and the world's most adorable boy, by whom he is lucky to be called "Dad."

Colophon

The animal on the cover of *Cloud Native Go* is a member of the tuco-tuco family (*Ctenomyidae*). These neotropical rodents can be found living in excavated burrows across the southern half of South America.

The name "tuco-tuco" refers to a wide range of species. In general, these rodents have heavily built bodies with powerful short legs and well-developed claws. They have large heads but small ears, and though they spend up to 90% of their time underground, their eyes are relatively large compared to other burrowing rodents. The color and texture of the tuco-tucos' fur varies depending on the species, but in general, their fur is fairly thick. Their tails are short and not particularly furry.

Tuco-tucos live in tunnel systems—which are often extensive and complicated—that they dig into sandy and/or loamy soil. These networks often include separate chambers for nesting and food storage. They have undergone a variety of morphological adaptions that help them create and thrive in these underground environments, including an improved sense of smell, which helps them orient themselves in the tunnels. They employ both scratch-digging and skull-tooth excavation when creating their burrows.

The diet of the tuco-tucos consists primarily of roots, stems, and grasses. Today, tuco-tucos are viewed as agricultural pests, but in pre-European South America they were an important foodsource for indigenous peoples, particlarly in Tierra del Fuego. Today, their conservation status is contingent upon species and geographic location. Many species fall into the "Least Concern" category, while others are considered "Endangered." Many of the animals on O'Reilly covers are endangered; all of them are important to the world.

The cover illustration is by Karen Montgomery, based on a black and white engraving from *English Cyclopedia*