ABSTRACT

Netflix’s architecture involves thousands of microservices built to serve to stream movies to hundreds of millions of subscribers. As this architecture grew, it became clear that the data storage and query patterns needs were unique to each area; there is no silver bullet which fits the data needs of all these microservices. No longer do developers struggle with mapping graph data into relational tables, adapting document-oriented data into columnar stores, or mashing key-value data into blob stores.Unlocking these benefits comes with costs, from operational complexity to cognitive overload and more. Netflix embraces polyglot persistence, which promises to offer ideal matches between problem spaces and persistence solutions. In this talk, we are going to showcase how we solved the unique business use cases and represented the data to adhere to the best model for each use case. I will discuss the challenges around offering database as a service, especially in a polyglot environment, as well as the benefits, pitfalls, and the lessons learned from our persistence architectures.

Contact information:
ipapapa@unm.edu

Speaker Bio Ioannis Papapanagiotou is a senior architect at Netflix and a research assistant professor at the University of New Mexico. He holds a dual Ph.D. degree in Computer Engineering and Operations Research from NC State University. His main focus is on distributed systems, cloud computing, and the Internet of Things. In the past, Ioannis has served in the faculty ranks of Purdue University (tenure-track) and NC State University, and as an engineer at IBM. He has been awarded the NetApp faculty fellowship and established an Nvidia CUDA Research Center at Purdue University. Dr. Papapanagiotou has received the IBM Ph.D. Fellowship and Academy of Athens Ph.D. Fellowship for his Ph.D. research, and best paper awards in several IEEE conferences for his academic contributions. He has authored a number of research articles and patents, and is a senior member of ACM and IEEE.