**CONCLUSION**

This paper presents ARMVAC, an adaptive resource manager to select low-cost cloud instances for analyzing MJPEG data from globally distributed network cameras. Inputs to ARMVAC are the analysis programs, the required number of cameras, the locations of the cameras, the target frame rates, and the durations of the analyses. The outputs are the types, locations, and number of cloud instances to be launched to achieve the target frame rate on all the cameras. ARMVAC includes a model to predict the maximum number of streams that can be analyzed on different types of instances. We evaluate ARMVAC using Amazon EC2 cloud instances and observe that the achieved frame rate on all cameras is equal to the target frame rate for different input scenarios thereby satisfying the performance requirements. We observe that ARMVAC lowers the overall cost up to 62% when compared with four other reasonable strategies (ST1 - ST4) for selecting cloud configurations. Our evaluation demonstrates that our method is not ad-hoc and can be applied to different analysis programs.

As part of our future work, we will extend the method to handle analysis programs which are memory intensive, bandwidth intensive, or I/O intensive. We would also like to improve our method of adaptively launching instances while adjusting to the run-time conditions. We also plan to study effect of adaptive nature of H.264 streams on resource selection.