**Design of a file-less Deployment Packer/Loader Systems**

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**Abstract.** Our project fulfills a request to produce a software toolkit that allows for remote code execution completely in RAM via a service running on a remote host.

Ski lifts transport 51.8 million ski resort visitors on average annually. Due to climate change shortening the winter season, 80% of ski resorts are now open during the summer. Despite nearly doubling their lift operating days nationally from 117 to 204 days on average, the number of inspections has remained constant due to the danger of climbing lift towers and limited maintenance budgets. A safer inspection system is needed to increase frequency without increasing cost. Based on a detailed requirements analysis, three design alternatives were identified: (1) the current manual inspection method in which inspectors climb the towers, (2) a stationary platform mounted on the lift towers with HD and thermal cameras, and (3) a mobile aerial platform with HD and thermal cameras. The images from the HD and thermal cameras are processed to automatically identify component defects. A stochastic simulation was developed to compare the performance of the alternatives. Inputs

*Abstract must be between 300 and 500 words and should include concise summary of the project including: Context, Stakeholders, Concepts of Operations, Requirements, Design (including trade-offs of alternate designs), Implementation, Verification, Validation, and Business Plans. Abstracts may include preliminary results. Abstracts must include* Title *and* Authors Names*.*