Project Proposal

Title: **Mitigating Ddos Attacks Using Cloud-Based Security Tools**

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The purpose of this research project is to explore today’s cloud strategies for detecting and reducing Distributed Denial of Service (DDoS) attacks. Society relies heavily on web applications as well as cloud-based products which means the need for protecting back-end APIs and other services from attacks has become a priority. The project will look to use a hands-on approach of simulating traffic spokes with the help of tools such as Apache Benchmark or Locust against a Python-based REST API that is hosted on a cloud. We will then look to apply and evaluate the effectiveness of strategies using applications such as: AWS Web Application Firewall (WAF), rate limiting, and other threat detection tools. This paper will look to analyze detection time, performance impact, and the strengths / weaknesses of different types of defense methods.