

Kunal Mittal

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Work Experience

Cisco, Technical Marketing Intern II	<i>June 2023–Present</i>
<ul style="list-style-type: none">Developed a propensity model using various machine learning techniques from scikit-learn and PyTorch to determine purchase intent of users depending on their interaction with the free trial with an accuracy of 75%.Determined what features of a campaign correlate to purchase intent using techniques such as logistic regression, SVD, decision trees, and pearson correlation.Created an internal SaaS tool for integration to decrease time spent reaching out to Leads by 92%.Implemented an internal chatbot using spatial embeddings to semantically match questions with SQL queries that retrieve data from snowflake databases.Implemented a bot that periodically retrieves new information from snowflake about free trial users and organizes them by user for fast lookup in webex.	
Organic, Software Engineer Intern	<i>June 2021–Dec 2022</i>
<ul style="list-style-type: none">Collaborated with ads, core, and devops teams to discuss and implement features for the startup's SDKIncreased data report accuracy by 5% by developing scripts that detect ad-blockers/botsDeveloped a bot that used Puppeteer API for node.js and headless chrome to test aforementioned scriptsImproved page load time by 13% by implementing a parallel bidding system to load advertisements on pages using Amazon Publishing Service(APS)Decreased page load times by 20% by integrating video players into the company SDK using various programs so users can customize video arrangementUsed Django and Next.js to create and redirect API endpoints	
University of California Riverside, CSE Department Research Assistant for Professor Faloutsos	<i>Jan 2023–Present</i>
<ul style="list-style-type: none">Extended existing malware analysis tool C2miner to work with additional architectures such as ARM.Discussed with Amazon AWS security team to improve performance and incorporate C2Miner into the cloud without violating security procedures.Analyzed network traffic behavior from malware using wireshark, tcpdump, and pyshark	
University of California Riverside, CSE Department Research Assistant for Zhiyuan Qian	<i>Jan 2023–Present</i>
<ul style="list-style-type: none">Assisted in developing kernel level exploits using techniques such as heap spraying, arbitrary writes, and data racesUsed tools like syzkaller and qemu to emulate victim machine and determine workarounds for system protections	
University of California Riverside, Cybersecurity@UCR Graduate Advisor	<i>September 2019–Present</i>
<ul style="list-style-type: none">Created content and lectures on the severity of hacking and the legal ramifications of misusing pentesting toolsInstructed students on pentesting boxes on hackthebox.eu using tools offensive security toolsCompeted in defense competitions to secure vulnerable applications within the service and through AWS tools	

EDUCATION

University of California, Riverside Master of Science in Computer Science GPA: 3.95/4.0	Riverside, CA <i>Jan 2023 - Present</i>
University of California, Riverside Bachelor of Science in Computer Science, GPA: 3.93/4.0	Riverside, CA <i>Sept 2019 - Jan 2023</i>
Certifications	
GIAC Foundational Cybersecurity Technologies(GFACT)	<i>Sep 2023</i>
Azure Fundamentals	<i>Mar 2023</i>
eLearnSecurity Junior Penetration Tester	<i>Jan 2023</i>
HP Summer Scholar	<i>Jul 2020</i>

Additional Skills

Programming Languages: C++, Python, Javascript, Node.js, Go, C, Java
Tools: JetBrains IDEs, VMWare Fusion, VirtualBox, Visual Studio Code, Jupyter Notebooks
Softwares: Azure, MongoDB Atlas, GraphQL, React, VirusTotal, Qemu, Django