



Internship: RealPhish

Reference	CYBERINSTITUTE-INT-20014
Description	<p>The attackers more and more extensively use domain names in their phishing attacks to lure benign users into providing them details of their credit cards, banking credentials, etc. During this internship, we plan to explore the possibility of detecting phishing domains from available Domain Name System (DNS) zone files published by registry operators of top-level domains (TLDs). First, based on observed domains the intern will preselect “candidate” domains and then based on active measurements the intern will actively collect a predefined set of features that will be further used in classification of domains imitating the original websites of banks, governments, universities or financial institutions.</p> <p>There already exist blacklists such as Phishtank or OpenPhish but they are mainly community based (end users reporting on seemingly phishing domains) and are susceptible to false positives (when benign domains are incorrectly reported as malicious). Hence, we propose an empirical method based on a combination of passive and active measurements and machine learning techniques to provide a real-time system capable of detecting phishing domains.</p> <p><u>Context:</u></p> <p>The Grenoble Alpes Cybersecurity Institute – in short, Cyber@Alps – is a project selected in 2017 by the Cross-Disciplinary Program (CDP) of the IDEX Univ. Grenoble Alpes and aims at undertaking ground-breaking interdisciplinary research in order to address cybersecurity and privacy protection challenges. Our main technical focus are on cost effective secure elements, security of critical infrastructures all along their life cycle, vulnerability analysis and global challenges in terms of risk analysis and validation of large systems, including practical resilience across the industry and the society. Our approach to cybersecurity is holistic, encompassing technical, legal, law-enforcement, economic, social, diplomatic, military and intelligence-related aspects with strong partnerships with the private sector and robust national and international cooperation with leading institutions in France and abroad (https://cybersecurity.univ-grenoble-alpes.fr)</p>
Prerequisites	Python programming, knowledge of the domain name system is considered as a plus

Tutors	Maciej Korczynski
Applications	Please send your resume, application letter with two recommendations (including education director), first year master’s degree grades (mandatory) and second year grades (if possible) to cyberalps-contact@univ-grenoble-alpes.fr For more information on the internship, please contact maciej.korczynski@univ-grenoble-alpes.fr
Location	LIG Lab, Drakkar
Starting date	03/02/2020
Duration	31/07/2020
Allowance	In accordance with existing regulations (approx. 560€/month). Part of travel expenses can be covered.