Cyber Threat Intelligence: An Artificial Intelligence Approach

Opportunity for a 6-month internship

Maintaining security is a constantly shifting task, and we need to respond with continuous learning and research. The portfolio of SAP Security Research contains those topics that we believe are most important for SAP's security future.

SAP's vision to secure business is built on 3 ideals: **Zero-Vulnerability**, to harden the software by eliminating vulnerabilities, **Defensible Application**, to enable the software to identify and prevent attacks, and **Zero-Knowledge**, to make any theft of data useless through encryption.

Considering these aspects, SAP Security Research covers the following focal areas: Anonymization for Big Data, Secure Internet of Things, Software security analysis, Open-source analysis, Deceptive application, Applied cryptography, Quantum technology, and Machine Learning as enabler for the next generation of security.

Security Research proposes a 6-month internship in its Sophia-Antipolis offices (Mougins, France).

INTERNSHIP TOPIC

Threat intelligence, or cyber threat intelligence, is information an organization uses to understand the threats that have, will, or are currently targeting the organization. This info is used to prepare, prevent, and identify cyber threats looking to take advantage of valuable resources. Data classification is a pillar element of threat intelligence, and we propose in this internship to study and apply the most advances AI algorithms to classify heterogeneous sources of cyber security data in order to create an intelligent knowledge base.

In the above-described context, the specific goals of the internship are as follows:

- Develop several sources crawlers that will capture various kind of data
- Create script based filters in order to process the collected data
- Train a machine learning system to recognize specific content
- Use clustering algorithms to identify content correlation
- Develop user friendly UI

Technologies/techniques involved are: Go Lang, Python, MangoDB, NodeJS, Java, JavaScript, and Machine Learning libraries, TensorFlow

We expect that 40% of time will be dedicated to research activities, and 60% to development

CANDIDATE PROFILE

- University Level: Last year of MSc in Computer Science or beyond
- Javascript, JSON expert, Go Lang
- Python development skills
- Experience in Java
- Security Knowledge
- Good web developer: HTML5, UI5, XS JS
- Database Management experience
- Fluency in English (working language)
- Abilities in organizing meeting and contacting people
- Good oral and written communication skills
- Capacity to write documents in English, ability to synthesize

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INTERNSHIP CONTEXT

SAP

Founded in 1972, SAP has grown to become the world's leading provider of business software solutions. SAP is market leader in enterprise application software. The company is also the fastest-growing major database company. Globally, more than 77% of all business transactions worldwide touch an SAP software system. With more than 347.000 customers in more than 180 countries, SAP includes subsidiaries in all major countries. SAP is the world's largest inter-enterprise software company and the world's third-largest independent software supplier, overall. SAP solutions help enterprises of all sizes around the world to improve customer relationships, enhance partner collaboration and create efficiencies across their supply chains and business operations. SAP employs more than 98.600 people.

Security Research at SAP Labs France, Sophia Antipolis

Based at SAP Labs France Mougins, Security Research Sophia-Antipolis addresses the upcoming security needs, focusing on increased automation of the security life cycle and on providing innovative solutions for the security challenges in networked businesses, including cloud, services and mobile.

STANDARD INTERNSHIP PACKAGE

- *Salary*: depending on the length of the internship and your diploma.
- *Lunch*: SAP Labs France has a local cafeteria; interns contribute 2,63 €uro/lunch, like other SAP employees.
- *Holidays*: French Bank Holidays
    - January 1st; April 12th, April 13th, May 1st, May 8th, May 21st, June 1st, July 14th; August 15th, Nov 1st and 11th; December 25th
- *Travel*: no trip will be paid by SAP.
- *Accommodation*: SAP can propose an accommodation for the duration of your internship. The accommodation is subsidized by SAP: the intern pays half of the rental cost: 342€ for a 1-room apartment or 442€ for a 2-room apartment (Choice depending on the availability).

CONTACTS AND PROCEDURE

Please candidate by clicking on this link:
https://career5.successfactors.eu/sfcareer/jobreqcareer?jobId=232926&company=SAP&username=

UPLOAD (all documents must be in English):
- Your CV
- Cover letter
- Any relevant documents

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