## Summer Internships 2014
### Undergraduate students

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Check Point

Network IOC research

Company: Check Point

Job description: go over PCAPs to locate interesting artifacts, parse those and look for connections between different artifacts.

Requirements: good networking understanding, good security understanding, scripting knowledge (python or any other language).

Full/Part time position: full.

Contact details: Maayan Kurzweil maayank@checkpoint.com

Malware IOC research

Company: Check Point

Job description: go over malware behaviors to locate interesting malware behavior and find different implementations for those behaviors in API call sequences. Implement a mechanism to locate those behaviors.

Requirements: malware experience, good security understanding, scripting knowledge (python or any other language).

Full/part time position: full.

Contact details: Maayan Kurzweil maayank@checkpoint.com

Virtualization enhancement project

Company: Check Point

Job description: learn the implementation of the dcaf project and integrate it into a malware analysis lab.

Requirements: Python, good understanding of OS concepts (Windows and Linux), good understanding of programming concepts.

Full/part time position: full.
**Honeynet developments**

**Company:** Check Point

**Job description:** develop a honeynet/honeypot for attracting new malware samples in order to catch samples from the wild.

**Requirements:** good security understanding, scripting knowledge (python or any other language).

**Full/part time position:** full

Contact details: Maayan Kurzweil maayank@checkpoint.com

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**Network profiling project**

**Company:** Check Point

**Job description:** end-to-end development of a system that profile user behavior in the network - This includes: build a rapport of each node in the network - network profiling, passive/active network feature extraction using various MiTM techniques, train anomaly detection machine learning algorithms to detect network abnormalities.

**Requirements:**
- Knowledge of one of the following programming languages: Python/C#/Java/PHP programming – must
- Network protocols – must
- Machine Learning/Data Mining Basics - nice to have
- Security landscape knowledge – nice to have

**Full/part time position:** full

Contact details: Maayan Kurzweil maayank@checkpoint.com

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**Malware visualization project**

**Company:** Check Point

**Job description:** end-to-end development of system that visualize malware families. This includes: static and dynamic feature extraction from multiple file formats, train machine
learning algorithms to classify malicious samples into families, visualize the results in an easy-to-use web portal.

Requirements:
- Knowledge of one of the following programming languages: Python/C#/Java/PHP programming – must
- Machine learning/Data Mining Basics - nice to have
- Security landscape knowledge – nice to have

Full/part time position: full

Contact details: Maayan Kurzweil maayank@checkpoint.com

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**Enterprise calendar or contacts for Windows Phone 8 operating system**

Company: Check Point

Job description: develop a dedicated C#/WPF application, running on Windows 8 operating system accessing corporate Exchange server using dedicated secure APIs and delivering corporate calendar (integrating with local operating system calendar) securely to the Windows phone user.

Requirements:
- Must: familiarity with C#
- Advantage: familiarity with WPF framework and Windows phone operating systems

Full/part time position: preference for full time, or highly available part-time

Contact details: Maayan Kurzweil maayank@checkpoint.com

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**Secure browser application for Windows 8 operating system**

Company: Check Point

Job description: develop a dedicated C#/WPF application, running on Windows 8 Operating System accessing corporate Exchange Server using dedicated secure APIs and delivering corporate contacts (integrating with local operating system contacts) securely to the Windows Phone user.

Requirements:
- Must: familiarity with C#
- Advantage: familiarity with WPF framework and Windows Phone operating systems
Cyber intelligence and analysis

Company: Check Point

Job description: the area focuses on technical analysis of current threats, based on malware samples, exploit and attack tools, logs and statistics of threat activity, etc. Some of the tasks we face, where we can define short-time projects for talented developers/researchers, include: Malware behavioral analysis (with machine learning aspects), Data analytics (“big data”...) for capturing attack campaigns and bot patterns, Automated analysis of exploits, Generation of applications signatures from traffic captures, Analysis of false-positive/false-negative errors in detection algorithms.

Requirements: fluency in a high-level programing language (C/C++/Java), A scripting language like Python/Perl – an advantage, Familiarity with network protocols (e.g., HTTP) and network analysis tools (e.g., WireShark) is a plus, practical experience with machine learning algorithms, SQL databases and/or Windows internal APIs (for malware behavior analysis) – an advantage.

Full/part time position: Could be both.

Contact details: Maayan Kurzweil maayank@checkpoint.com

Security analysis of logs

Company: Check Point

Job description: join advanced Check Point development project of analyzing high volume of logs indicating network traffic, application usages, user access, etc. using advanced techniques of correlations and learning and highlight items that indicate security threats.

Requirements: programming abilities in Java / C++

Contact details: Maayan Kurzweil - maayank@checkpoint.com
Rafael

**Biometric login for windows**

**Company:** Rafael

**Job description:** Design and implementation of software components which adds biometric identification to the windows login.

Optional extensions:
- User data is saved in windows Active Directory or other databases
- Different biometric devices
- Different operating systems

**Requirements:** OOD, C# (.net framework 4.5), undergraduates in the final stages of their studies

**Full/part time position:** full time

**Contact details:** alexke@rafael.co.il 04-8794220, 052-4291014

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**Active directory based user management framework**

**Company:** Rafael

**Job description:** extending the windows Active Directory schema to support advanced and secure user management. Including: adding proprietary data fields to the schema and security mechanisms to protecting the data, importing and exporting users between two different domains.

Optional extensions: extending the basic design of the framework to create a "light weight" user management framework which is not dependant on windows Active Directory.

**Requirements:** OOD, C# (.net framework 4.5), Windows Active Directory (optional), some coding experience, undergraduates in the final stages of their studies

**Full/part time position:** full time

**Contact details:** alexke@rafael.co.il 04-8794220, 052-4291014
Printer SDK

Company: Rafael

Job description: Design and implementation of a generic interface to a printer. Including specific implementations for a number of specific printers (specific printer driver and documentation will be provided).

The printer interface will be used by different applications developed in the software department. For each application the relevant specific printer implementation will be used.

Requirements: OOD, C# (.net framework 4.5), some coding experience, undergraduates in the final stages of their studies

Full/part time position: full time

Contact details: alexke@rafael.co.il 04-8794220, 052-4291014

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1. תשתית

חברה: רפאל

תיאור הפרויקט: שילובCLI עם גרפיקה מתקדמת יוכלلت שליטה על מרכיב גרפיקה והל"י, דוויי EVENTS על פקידי גרפיקה וול תחת אפליקציה סבבה בודקית.

דרישות:
1. הכרת עםCLI של אפליקציה ATEASY
2. הכרת עם מיבב פיתוח

פרטי קשר: אייל שריקי Eyalshr@rafael.co.il

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2. תשתית

חברה: רפאל

תיאור הפרויקט: הרחבת שגרות שירות ל CSCI קיים עבודה עם קבצים, קריאה מקובצי Конфигурации, בניית חלונות משתמש גנריים ווי EVENTS

דרישות:
1. הכרת עםCLI של אפליקציה ATEASY
2. הכרת עם מיבב פיתוח DLL, ציריך C, זייר

פרטי קשר: אייל שריקי Eyalshr@rafael.co.il
The Gwangju Institute of Science and Technology (GIST) was established in 1993 by the Korean government as a research-oriented school to produce highly qualified scientists and engineers, and to foster scientific and technological achievements. As a research oriented with super laboratories and the research centers, GIST ranked 6th in the world in Citations per Faculty in the QS World University Ranking in 2013. All lectures at GIST are conducted in English. If you want further information about GIST, please visit our homepage at https://ipa.gist.ac.kr/html/page02_02.html

GIST invite Technion student to the 2014 Fall GIST Global intern program, from September 1, 2014 to December 19, 2014. The primary objective of the GIST Global Intern Program is to carry out research and provide training related to science and technology.

Final date for submission: **May 15th, 2014.**

The detailed information is as follows;

- **Contents:** Research Opportunity in a Lab, Korean Language, Culture Trip (All lectures are in English)

- **Period:** September 1, 2014 ~ December 19, 2014 (16 weeks)

- **Financial support**
  - One-way airfare (economy class)
  - Dormitory accommodation (two persons per room)
  - Monthly Stipend of 300,000 Korean Won (approximately $290)
  - Medical insurance during the Program period

For more information and application forms, please contact: Noa Nof-Steiner, Technion International Relations and outgoing students (noan@int.technion.ac.il)
The Beihang International Undergraduate Summer School 2014

Overview: BEIHANG University is a top-class science and engineering research and education institution in China. Since 1952, this university has played a leading role in many academic fields, such as informatics, electronics, electrical engineering and systems engineering.

The year 2014 is the official “Year of Global Outreach” of BEIHANG University. We have chosen 20 out of more than 1,500 courses to create a four-week summer school program for both domestic and overseas undergraduate students.

The BEIHANG International Summer School (ISS) 2014 consists of 20 courses which will run from July 7 to August 1, 2014. All courses are conducted in English. 12 “core” 2 courses are intended for those who are majoring or are interested in information science and other related disciplines. The other 8 courses will introduce different aspects about China and Chinese culture.

Arrangements:

Theme: Information Science
Language: English
Time: Monday July 7 – Friday August 1, 2014
Duration: 26 days (4 weeks)
Application Opens: Monday May 5, 2014
Application Deadline: Friday June 6, 2014
Registration & Check-in Dates: Saturday July 5 – Sunday July 6, 2014
Check-out Dates: Saturday August 2 – Sunday August 3, 2014
Campus Address: 37 Xueyuanlu Street, Haidian District, Beijing 100191, P. R. China
Number of Participants: limited to approx. 300 students

Courses & Activities: courses on general and frontier disciplines (science and engineering), courses on China studies, academic and/or cultural tours

Admission & Application: For more information and application forms, please contact:
Noa Nof-Steiner, Technion International Relations and outgoing students (noan@int.technion.ac.il)

Costs & Scholarship:
- 2 students nominated by each partner university of BEIHANG will enjoy a full scholarship which covers international travel expenses up to a maximum of 10,000 RMB per overseas student, registration and tuition fees, accommodation
(in the student dormitory) costs, meal allowance (30 RMB / day) and arranged local tours during the period of the summer school.

- Other students from partner universities and students from non-partner universities will be exempt from registration and tuition fees, accommodation (in the student dormitory) costs, meal allowance (30 RMB / day) and arranged local tours during the period of the summer school.