PANAYIOTIS KARACHRISTOU

SUMMARY

Currently working as a Research Assistant in collaborative robot security. Finished a Masters in Artificial Intelligence and Cybersecurity at the University of Sheffield. Completed BSc Hons Computer Science at the University of Portsmouth. Programming experience in Java, Python, C#, Haskell and LUA, HTML, CSS, JavaScript.

EDUCATION

2018 - 2019   University of Sheffield - MSc Cybersecurity and Artificial Intelligence - Grade: Distinction

- Dissertation - AI and Intrusion detection systems, using machine learning algorithms.
- Learned about fundamental security properties and mechanisms and how to develop secure software.
- Implemented a Fuzzer in Python which had the ability to find vulnerabilities in a website with a grade of 75/100.
- Was taught about Machine learning and adaptive intelligence. This knowledge was further applied in scalable machine learning using Spark & HPC.
- Lastly was taught about text processing and natural language processing topics in which algorithms such as Perceptron, Viterbi and Beam Search were implemented.

2015 - 2018   University of Portsmouth - BSc Hons Computer Science - Grade: First-class honours

- Final year project - Developed an android application a surveying tool with the ability to detect and show information about asbestos infected areas for Hampshire Scientific Services. In a team of three, using Java, Android studio and EasyAR SDK (Augmented Reality). Grade 66/100.
- The areas covered include programming, computer systems, networks, security, robotics and computer science theory.
- Developed a colour and shape sorting robot using the LUA programming language in V-Rep, 86/100.
- Learnt the fundamental principles of computer networking topologies and professional standards and was introduced to plethora of topics including routing, mobility, and network security.
- Created a fully functional website using HTML and CSS. With a grade of 76/100.
- Worked in a three-person team and developed an order system for a box-selling company using Java.
- Worked in a 5-person team and developed a Digital assistant software using Java.

WORK EXPERIENCE

Dec 2019 – Present   Research Assistant in Collaborative Robot Security – University Of Sheffield

- My duties include researching, attending conferences and developing software.
- Creating threat models and security policies for Collaborative robots (Cobots).
- Currently working to create Intrusion Detection Systems for Cobots using machine learning.
- Helping in the development of a digital twin for Cobots using C#.
- Assisted in the development of the UK-RAS Manufacturing Robotics Challenge 2021.

Oct 2021 – Dec 2021   Instructor, Code First Girls – Remote, Online

- Voluntarily instructed an Introduction to Web Development course to students who are new to programming and identify as female or non-binary.

Jul 2013 – Jun 2015   Guided missile operator, National guard of Cyprus – Cyprus Army

- After training, assigned to be a guided missile operator, which required operating specialist electronic equipment, accuracy, concentration and confidence. Worked in teams and under extreme pressure and circumstances.

Jun 2012 – Aug 2012   Sales and Repairs, "The Pc Store" – Polis, Paphos, Cyprus

- Installed, repaired, and upgraded desktop and notebook computers as well as printers.
- Customer service which enhanced verbal communication skills and the ability to deal with customer problems.

PUBLICATIONS

[1] M. Gleirscher, N. Johnson, P. Karachristou, R. Calinescu, J. Law, and J. Clark, "Challenges in the safety-security co-assurance of collaborative industrial robots," arXivpreprint arXiv:2007.11099, 2020.

INVITED TALKS AND ACADEMIC ACTIVITIES

Oct 2021 Cyber Security Team Project, 3rd Year BSc Module – University of Sheffield

- Guest lecture, Subject of presentation: Cybersecurity of Collaborative robots and intrusion detection systems.

Apr 2021   AAIP Assuring Robotics and Autonomous Systems, MSc Module – University of York, Online

- Presented online, Subject of presentation: Cybersecurity of Collaborative robots

July 2020   LxMLS 2020 – Lisbon, Online

- Attended the Lisbon Machine Learning Summer School

SKILLS

Programming: Java, Python, Haskell and LUA, C#, CSS, HTML, JavaScript

ML Software: Scikit-learn, Pytorch

LANGUAGES

- English: Fluent, GCSE - English as a Second Language
- Greek: Fluent, Native language

OTHER INTERESTS AND ACTIVITIES

- Magic - Since childhood, self-thought and researched new tricks. Magic skills have come into very good use, through performing advanced tricks.
- YouTube - The content uploaded is mainly tutorials on magic tricks. Responsible for editing, recording, uploading videos, channel art and intros with adobe after effects, Sony Vegas and Photoshop. Listed is the channel link: https://www.youtube.com/user/TheBlackGoldVideos