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PANAYIOTIS KARACHRISTOU

SUMMARY

I am a software engineer with over 2 years of experience at OCLC, where I have honed my skills in various programming languages and frameworks. Previously, I worked 2 years as a Research Assistant, focusing on collaborative robot security using machine learning. I hold a Master's degree in Artificial Intelligence and Cybersecurity from the University of Sheffield, and a BSc Hons in Computer Science from the University of Portsmouth. I have programming experience in Java, Python, Haskell, LUA, HTML, CSS, Spring Boot, React, Typescript, Javascript, SQL, PostgreSQL, Open API and YAML.

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.
- Developed a colour and shape sorting robot using the LUA programming language in V-Rep, 86/100.
- 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

May 2022 – Present   Software Engineer – At OCLC, Sheffield, United Kingdom

- Developing software for libraries across the globe.
- Gained programming experience in Java, HTML, CSS, Spring Boot, React, Typescript, Javascript, SQL, PostgreSQL, Open API and YAML.
- Attended a react course.

Dec 2019 – Apr 2022   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#, HTML, CSS, Spring Boot, React, Typescript, Javascript, SQL, PostgreSQL, Open API and YAML.

ML Software: Scikit-learn, Pytorch

LANGUAGES

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