

# **Konstantinos Ntouros**

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# **ABOUT ME**

I am a dedicated software engineer and cyber-security researcher. I focus on server-side programming using new technologies and conducting research ...

I am also fun of videogames. I love discovering new things.

# WORK EXPERIENCE

# **Software Engineer**

Konstantinos Ntouros [ 10/2020 - Current ]

City: Tripoli | Country: Greece

# **Cybersecurity Researcher**

Konstatninos Ntouros [06/2023 - Current]

City: Tripoli | Country: Greece

-Electrical Vehicle (EV) Charging Security, OCP 1.6 and 2.1 Protocol -Collaborative Intrusion Detections Systems (IDS) -Trust Management Systems (TMS)

# **EDUCATION AND TRAINING**

# **Undergraduate Student**

University of the Peloponnese, Department of Informatics and Telecommunications, B.Sc. [10/2020 – Current]

City: Tripoli | Country: Greece

# **High School**

7th General High School of Acharnes [09/2017 - 06/2020]

City: Acharnes | Country: Greece

# LANGUAGE SKILLS

Mother tongue(s): Greek
Other language(s): English, B2 Level (ECCE, Lower)

# **DIGITAL SKILLS**

# **Programming Languages**

C / Java / Python / C++ / C# / Go/Golang / PHP / HTML 5 / JavaScript / CSS 3 / Shell / TypeScript / Assembly x86 / CMD/ Powershell/Bash Script / Promela

# Web Technologies

Express / AJAX / Handlebarsjs / Socket.io(server-client) / Discord Js / Bootstrap / JQuery / Web Development / Electron JS / Leaflet JS / Axios JS / Next JS / Apache Cordova

### Cybersecurity

IoT security / Post Quantum Security / Cryptography / OSINT Tools / Cybersecurity Tools and Analysis / Offensive and Defensive Security and Tools / Intrusion Detection Systems / OCPP Protocol 1.6

# **Operating Systems**

Windows / Debian Based OS / Linux (Terminal Commands, Bash/Shell) / UNIX and Linux OS. / Kali Linux

#### **General Knowledge**

UAVs (Drones) / Visual Paradigm / Raspberry Pi / DroneKit / Algorithms and Data Structure / MavSDK / Git / Blockchai ns / Arduino / Docker / OpenVPN / Pixhawk4 / Prometheus and Grafana / ArduPilot Mission Planner / MAVLINK / Q Ground Control / UML / API / XML / JSON / Apache Hadoop (HDFS, Map/Reduce etc) / Apache Lucene / Rapid Miner Software / hmailServer / Postfix / Networking / Filezilla- FTP(SFTP) Client-Server / Unix Shell (SSH) / TCP/IP / IPFS / Wire shark / Github / Software Engineering / Object-Oriented Programming / Basic SOHO networking / API Integrations / M icrosoft/ Microsoft Office / GCC / Design Patterns / Code Review / npm / npx / pip / MavProxy / Figma / VSDC Video Editor / 3dsMax 3d modelling / Web RTC / Web API / Web Sockets / MASM / NASM / Virtual Box/Virtual Machine / KVM virtualization / VMware / SPIN and ISPIN / JAVAFX / Object-Oriented Programming (OOP) / TKinter (GUI) / Numpy / Dis cord Py / Matplotlib / Numba / JavaFX Scene Builder / Hyperledger (Fabric) / AppInventor / Autohotkey/Autokey / Tem permonkey / Zeek/Suricata/Snort IDS / Vizard/Vizact / JavaFX FXML Application / Maven/Gradle / Next Engine 3D Desktop Laser Scanner

#### **Server Side**

Socket Programming / Mail Servers / NodeJS / Apache / Servers / Platform : AWS Cloud / WAMP/XAMPP / Nginx / PM2 / Hosting and DNS / Microservices / Services / Flask

#### Databases

MongoDB / SQL / PostgreSQL / MySQL / Relational databases / SQLite / Firebase/Firestore

#### **Editors**

VS Code / Visual Studio / Netbeans / JetBrains Intellij Idea / Eclipse / Atom / Sublime Text / Android Studio / Notepad+ + / VIM Text Editor / Nano / Arduino IDE / Mono Develop / Code::Blocks

#### Languages i've used a little or i've seen them

Lua / Fortran / Perl / Pascal / Ruby / Matlab

#### Technologies i've used a little or i know in theory

ElasticSearch and Kibana / Kubernetes / Cassandra (NoSQL) / Django / Angular JS / Vue JS / React JS / Vite/Vue JS / Tail wind / Wazuh / TURN/STUN Server / Spring (Spring Boot, Spring Security)

#### PUBLICATIONS

#### [2024]

SEAGuard: A Blockchain-Based Security Framework for IoT Maritime Transportation Systems 2024 IEEE International Conference on Cyber Security and Resilience (CSR), DOI: <u>10.1109/CSR61664.2024.10679490</u>

Panagiotis Leonis; Konstantinos Ntouros; Antonio I. Mazilu; Sotirios Brotsis; Nicholas Kolokotronis

#### [2024]

<u>UAV Swarm Management Platform for Autonomous Area and Infrastructure Inspection</u> 2024 Panhellenic Conference on Electronics & Telecommunications (PACET), DOI: <u>10.1109/PACET60398.2024.10497082</u>

Michael C. Batistatos, Antonio I. Mazilu, et al.

# VOLUNTEERING

#### [ 18/05/2024 ] Kalamata, Greece

**3rd Festival of Robotics and Intelligent Systems of the Municipality of Kalamata** Together with a professor and several colleagues from the University of Peloponnese, Department of Informatics and Telecommunications, we participated in this festival to showcase our innovative projects.

Our first project featured a drone equipped with a camera, allowing users to experience live video streaming in realtime through VR goggles. By using a TrackIR system, users could control the drone's camera direction, enhancing the immersive experience as the camera responded to head movements. This setup operates entirely over network protocols, removing the need for traditional RF signals.

We also developed an autonomous swarm drone system. In this system, when a primary drone, equipped with AI, detects a specified target or event, it automatically sends a signal to the other drones in the swarm to take off and follow it. This coordination is achieved entirely over network connections, utilizing 4G/5G technology without reliance on RF signals.

These projects demonstrate advancements in remote-controlled and autonomous drone technology, leveraging modern network capabilities for enhanced real-time responsiveness and AI-based decision-making.

This presentantion was organised by the University of the Peloponnese, Faculty of Economics and Technologies, Department of Inofrmatics and Telecommunications, and from DCS Lab (Digital Communications Systems Lab).

#### [ 24/04/2024 ] Tripoli, Greece

**University of Peloponnese, Informatics and Telecommunications: "Live a day as a uni student"** Gave a presentantion about an exploit called Eternal Blue.

Live demonstration of this exploit how it works etc.

Collaborating with a fellow student.

Under the Cryptography and Cybersecurity Lab of University of Peloponnese, Department of Informatics and Telecommunications, Faculty of Economics and Technology.

#### [ 20/04/2024 ] Athens, Greece

**Athens Science Festival: "Eternal Blue: The Secrets of Cybersecurity"** Gave a presentation titled "Eternal Blue: The Secrets of Cybersecurity" at the Athens Science Festival, collaborating with a fellow student.

Under the auspices of the University of Peloponnese, Department of Informatics and Telecommunications, Faculty of Economics and Technology.

[ 16/04/2024 - 21/04/2024 ] Athens, Greece

**Athens Science Festival** 

[04/05/2023] Tripoli, Greece

**University of Peloponnese, Informatics and Telecommunications: "Live a day as a uni student"** Gave a presentantion about cybersecurity tips, phising attack and wifi atacks.

Live demonstration for phising attacks and wifi attacks.

Collaborating with a fellow student.

Under the Cryptography and Cybersecurity Lab of University of Peloponnese, Department of Informatics and Telecommunications, Faculty of Economics and Technology.

[ 10/10/2023 – 12/10/2023 ] Athens, Greece

**Athens Science Festival** 

# [23/11/2022] Tripoli, Greece

**Torches, Dragons, and Electrons: Signaling with Morse Code at the Malliaropoulio Theater with the University of Peloponnese** We held an engaging presentation at the Malliaropoulio Theater in Tripoli, organized by our lab at the University of Peloponnese with guidance from our professor and participation from fellow students. The audience, kids aged 10–14, were taken on an interactive journey through the evolution of telecommunications. We explored how people communicated over time, from ancient methods to modern electronics. Demonstrations included building Morse code signaling systems using Arduinos, showcasing ancient "fryktories" (beacon systems) used for long-distance messages, and creating simple circuits with batteries and LEDs to light up. The event offered an exciting mix of history, technology, and hands-on learning, sparking curiosity and inspiration among the young attendees.

This presentantion was organised by the University of the Peloponnese, Faculty of Economics and Technologies, Department of Inofrmatics and Telecommunications, and from DCS Lab (Digital Communications Systems Lab).

# [ 21/10/2022 – 23/10/2022 ] Athens, Greece

**Athens Science Festival** 

# CERTIFICATES

### [05/02/2024]

# FORESIGHT: "ICN-Intermediate Cybersecurity Naval Certificate of Training Participation"

Basic concepts of cybersecurity; Cybersecurity in naval domain; Ship and crew cybersecurity; Maritime cybersecurity and SOP's best practices; Cybersecurity risk assessment; Cryptography, digital forensics and network security concepts; Maritime cybersecurity applications.

### [27/05/2023]

#### FORESIGHT: "PEN - Penetration Tester Certificate of Training Achievement"

Network penetration testing; Password attacks; Social engineering; SQL injections attacks; Cross-site scripting vulnerabilities; Cross-site request forgery vulnerabilities; Cookies manipulation.

# **PROJECTS**

**Police Database System** C# project about creating a police database system for categorizing criminals and storing criminal's informations.

Robot Wars Java console mini game.

Buffaloes on the head C console mini game. Minesweeper like.

**Erasmus web application** Designed a web application with a database for Erasmus students: user registration and management of information, which included eligibility checks. The application will include asynchronous requests to improve performance for quicker responses because all the data would be worked upon in real time and efficiently.

**Al Tic Tac Toe** A command line-based Tic Tac Toe was designed in Python. The Computer opponent is included with Al algorithms to study the board and make smart moves. The Al system will play intelligently on the game board and make such moves that give players a hard time to win and ensure fun gameplay.

**Persian vs Spartan Web Game** 2D 1 VS 1 Fighting game web based. This game was made using HTML, CSS for the frontend and JS for the game mechanics

**Client-Server Programming** Client and Server applications written in C. Those were made using C language and socket programming technologies.

**Custom Java Socket Server** Client and Server implementation in Java language. This program communicates through sockets with other servers and exchange data. One of the other servers is written in Go/golang using also sockets.

FALSE (Finally Another Lyrics Search Engine) Search Engine made in Java with Apache Lucene.

**Web Application** A web-based application that inducted user sign-up, verification-a custom-designed mail server using hMailServer for sending verification passes. User data was stored with security; PostgreSQL was used, along with high-level security against SQL injections, XSS, and more. The site was built mainly in PHP and automated the generation of VPN files for registered users to download and manage their VPN access. It automatically deletes the VPN file for the user and access to the network whenever any account is deleted. Technologies used include HTML, CSS, JavaScript, PHP, hMailServer, and PHPMailer for handling email.

**piranha-syntax-highlighting-package** This is a syntax highlighter for Piranha language. This package is made for Sublime Text.

Package available on my github profile.

Arduino Transmit and Receive Data through RF Arduino project, for receiving and transmitting data through rf.

**Discord Bots** I have made various discord bots using Discord JS library. The latest one is for controlling a minecraft server using Discord's slash commands.

# Bash Script mini games

**Projects in C** Console apps -Converter (Binary to Hex, hex to octa etc, for all combinations) -Project for making files depending on the lab team

Ascii Robot Ascii Robot in C#, using technologies such as delegates, indexing and events.

**Become a Millionaire. Hadoop Project** Data analysis using Hadoop (HDFS) and map/reduce. The project was made in Java

**Database project website** Simple website for making queries to a postgreSQL database and return the data to a table format.

This website was made using PHP, HTML and CSS.

Al Spam Detector Python program that implemets Al algorithms for recognizing spam

# **CONFERENCES AND SEMINARS**

[ 17/04/2024 ] Tripoli, Greece Business Planning and Downloading Decisions

[01/06/2023] Tripoli, Greece

University of Peloponnese, Informatics and Telecommunications, Chamber of Arcadia: "Magic world of IoT"

[ 24/05/2023 ] Tripoli, Greece University of Peloponnese, Informatics and Telecommunications, Chamber of Arcadia: "4 bit of history"

[03/03/2023] Tripoli, Greece

University of Peloponnese, Informatics and Telecommunications, Chamber of Arcadia: "Online dangers and how to protect yourself"

[ 13/12/2022 ] Tripoli, Greece PACET 2022: "Panhellenic Conference on Electronics and Telecommunications"

[ 15/04/2022 – 17/04/2024 ] Patras, Greece Electrical and Computer Engineering Student Conference (ECESCON) 13, University of Patras

# **OTHER WEBINARS AND CERTIFICATES**

[ 18/10/2023 ] EU Code Week 2023: "Let's Code Java"

[ 15/12/2021 ] AKTO: "Al as tool for innovation - tools and applications"

[ 11/12/2021 – 12/12/2021 ] Best Patras: "BEST Programming Bootcamping"

[ 25/10/2021 – 26/10/2021 ] YouthMakersHub: "Meet and Code, Create a website with HTML"

[ 21/10/2021 – 22/10/2021 ] YouthMakersHub: "Meet and Code, Cybersecurity Tips"

[ 18/10/2021 – 19/10/2021 ] YouthMakersHub: "Meet and Code, 2D & 3D 1.0"

[ 14/10/2021 – 15/10/2021 ] YouthMakersHub: "Meet and Code, 2D Game Design"

[ 11/10/2021 – 12/10/2021 ] YouthMakersHub: "Meet and Code, Game Design & VR"

[ 07/10/2021 – 08/10/2021 ] YouthMakersHub: "Meet and Code, Develop-IT"

[ 30/09/2021 – 01/10/2021 ] YouthMakersHub: "Meet and Code, 3D tools 1.1"

[ 03/06/2021 ] IEEE: "Advancemets in Power and Energy Industry"

[ 03/06/2021 ] University of Patras: "Stress, anxiety and their treatment"

[ 19/04/2021 ] Audax Cybersecurity: "Ethical-Hacking"