## George Mamidakis

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## Experience

## Security Researcher

Bcryptic

New York/Online

February 2024 - Present

- Auditing a Rust codebase containing 10 interconnected components for a node-level blockchain project based on scientific research. Targeting the core cryptography engine & a web component.
- Identifying corner cases & incorrect data handling that could lead to unexpected behaviours. Analyzing the project's academic paper cross-checking the algorithms to source implementations for potential differences.

#### **External Challenge Creator**

Athens/Online

HackTheBox

August 2022 - Present

- Authored 14 CTF challenges for various high-profile HackTheBox CTF events, like CyberApocalypse & BusinessCTF, & over 30 official writeups.
- Topics of challenges include Python pickle jail escapes, reversing a WinAPI Go malware, emulation with Unicorn, algorithms & data structures, & exploiting cryptography vulnerabilities on Elliptic Curves, PRNGs, & Stream Ciphers.

## Software Engineer Intern

Patra/Online, GR

Citrix Systems, Inc.

July 2021 - September 2021

- Deployed an event handler for malicious network incidents. Processed asynchronous events & interfaced with Slack & internal API to trigger response actions, improving incident response time.
- Familiarized with modern software development technologies (Docker, Kubernetes, Azure, Postman), as well as workflow tools & concepts (Agile, Jira, BitBucket, Confluence).

### **Projects**

CTF Teams

CTF Player

Online

February 2022 - Present

- Selected as a member of the Hellenic Cybersecurity Team in 2023 & 2022 for competing in the European Cybersecurity Challenge. Competed in national qualifiers, achieving 4th & 3rd respectively, & underwent a selection process spanning 5 months based on performance during training. Achieved 2nd place in 2024.
- Contributed to multiple outstanding CTF placements. Most notable results include:
  - Onsite finalist with idek at MidnightSun CTF 2024. Qualified online 5th out of 234 teams
  - 1st place out of 50 teams in the CyberSecurityChallenge Greece CTF hosted by NVISO
  - 3rd place in Europe at CSAW Embedded Security Challenge 2023, writing a Side Channel paper
  - 10th place out of 955 universities worldwide in the University CTF 2023 hosted by HackTheBox

#### **Personal Projects**

Online

See Github/Website for more

October 2019 - Present

- Writeups (2022-Present): Accepted as a writer on the PagedOut zine for an article on a reversing automation technique using GDB, & published writeups on my personal website going over various CTF challenges regarding reverse engineering & binary exploitation.
- CVE-2019-16784 POC (2023): Developed a Proof of Concept exploit in C using the WinAPI for a Windows PyInstaller version < 3.6 vulnerability. The vulnerability enables command execution & possible local privilege escalation through a DLL hijacking.
- TokenStealer (2023): Created a client Go malware to steal discord tokens from local system files. Communicates with a Python flask server which stores them in a sqlite3 db. Front-end written with bootstrap. Malware scored 7/71 on VirusTotal antivirus detection.

#### Education

#### University Of Macedonia

Certifications on personal interests

Thessaloniki, GR

B.Sc. Computer Science

September 2020 - Present

• Founder & CTF player at the Cyber Security Club @ University of Macedonia

#### Certifications

Thessaloniki/Online, GR

November 2020 - Present

- Hacking: Malware Development Essentials (Sektor7), Reversing C++ Binaries (OpenSecurityTraining2), Junior Penetration Tester (eLS)
- Misc: Leadership For Undergraduate Students (UOM)