

# Amar Lakshya

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‘A Chemical Computer computing on Digital Computers’

## Projects & Contributions



**LOGI'S CIRCLE OF SECURITY** : [github.com/amar-laksh/Logitech\\_pentest/blob/master/Report.pdf](https://github.com/amar-laksh/Logitech_pentest/blob/master/Report.pdf)

- A full Penetration test conducted on Logitech's Circle camera.
- The test showed that the Logi Circle is well-secured.
- The product uses security principles like secure defaults and defence-in-depth to secure the device.



**FOS - MADE TO BE OPEN** : [github.com/amar-laksh/fos](https://github.com/amar-laksh/fos)

- A Monolithic UNIX-like Kernel for the x86 and ARM (Raspberry Pi) platforms.
- ELF Parsing(with kernel parsing), PCI, Serial (ARM), Western Notes for PC Beeper and System Calls.
- Fully Functional Support for GPIO Pins (ARM) wrapped as Arduino-compatible functions.



**TRYINGTOKNOWYOUTBETTER** : [github.com/amar-laksh/TryinToKnowYouBetter](https://github.com/amar-laksh/TryinToKnowYouBetter)

- The Indian Election Commission's website leaks data that can be analysed to effectively locate all registered voters.



**STUDY OF CAPTCHAS** : [amar-laksh.github.io/2017/03/16/CAPTCHAs-on-ceo-sites.html](https://amar-laksh.github.io/2017/03/16/CAPTCHAs-on-ceo-sites.html)

- An extensive study of CAPTCHA systems present on The Election Commission Of India's websites across all the states in India.



**CACHE PATCH (CORE), MOZILLA CONTRIBUTION** : [git log | grep amar on codebase](https://git-log|grep-amar-on-codebase)

- Worked on patching cache entries that expire immediately in the Cache core of Mozilla codebase.
- Affects all Mozilla programs including Firefox and Thunderbird.



**VITAE** : [github.com/amar-laksh/vitae](https://github.com/amar-laksh/vitae)

- An Esoteric, Interpreted python-built language built entirely with regular expressions.
- Designed to introduce non-technical people to programming.



**REPLAYCER** : [addons.mozilla.org/en-US/firefox/addon/replaycer](https://addons.mozilla.org/en-US/firefox/addon/replaycer)

- A fun Browser Add-on to replace content on the web.
- Able to replace live content like twitter feeds etc.

## Work Experience

Sept 2018 - Feb 2019 **SYSTEMS ENGINEER (LEAD): Nymble Labs (Bangalore)**

- Revamping the entire software architecture to produce reliable, clean OOP code.
- Implementing the next iteration of the product using C++ 14, ROS2 and Qt5.

Dec 2017 - July 2018 **SOFTWARE ENGINEER - INTERN: Nymble Labs (Bangalore)**

- Designed a ROS2 based distributed software architecture of the system
- Designed an extensible Flask-based Web REST API for third-party devices.
- Designed coding standards and setup guidelines.
- Wrote the initial iteration of the software architecture in C++ 14.
- Wrote a Qt5 based display application for the on-board display.

July 2017 - Sept 2017 **JUNIOR DEVELOPER (LINUX) - INTERN: Apogee Tech Global Inc. (Bangalore)**

- Designed a cross-platform architecture for the Internet Security Suite
- Implemented the application on Windows, Mac, & Linux using Electron, React and Redux
- Created the backend functionalities using Python, Bash, and Ruby.

## Publications & Certifications

- 2019 **COMPTIA SECURITY+ CERTIFICATION:** [youracclaim.com/badges/3ed437c4-0623-4e26-bdc7-4b9c58fc8bab](https://youracclaim.com/badges/3ed437c4-0623-4e26-bdc7-4b9c58fc8bab)
- Earners of the CompTIA Security+ certification have the knowledge and skills necessary to perform core security functions required of any cybersecurity role.
- 2015 **CROSSED & KNOTTED:** [amazon.in/Crossed-Knotted-Various-Authors/dp/8192997529](https://amazon.in/Crossed-Knotted-Various-Authors/dp/8192997529)
- Co-Author of Limca Book of Records winning - India's First Composite Novel - written in collaboration with 12 Authors.

## Education

**Msc. Cyber Security - GCHQ Certified,** - Sept 2019 -  
Sept 2020  
University Of Birmingham, Birmingham, UK  
Modules taken:

- Cryptography
- Intelligent Data Analysis (Extended)
- Operating Systems(Extended)
- Designing secure systems
- Forensics and Malware Analysis
- Hardware and Embedded Systems Security
- Network Security (Extended)
- Penetration Testing
- Secure programming
- Secure system management
- Security Research Seminar
- Research project

**BSc. I.T., 3.26/4.00** - 2014-2017  
St. Xaviers College, Mumbai - Autonomous  
Modules taken:

- Applied Mathematics
- C++ Programming
- Operating Systems
- Computer Graphics
- Network Security
- Artificial Intelligence
- E-Commerce
- Data Warehousing and Mining
- Embedded Systems
- Advanced SQL
- Advanced Java
- C# with ASP.NET
- Software Testing
- Enterprise and Resource Planning
- Research project

## Positions Of Responsibility

- 2014 - 2017 **CLASS REPRESENTATIVE:** St. Xaviers College, Mumbai - Autonomous
- Worked to organize events like seminars and workshops for the BSc. I.T. batch.
- 2015 **PUBLIC RELATIONS VOLUNTEER - XENITH:** St. Xaviers College, Mumbai - Autonomous
- Worked on coordinating and organizing of Public Relations at different colleges for the IT Department Festival.
- 2014 **FOUNDING CORE MEMBER OF THE IT CLUB:** St. Xaviers College, Mumbai - Autonomous
- Worked on designing and ideation of the IT Department Festival.

## Technology Skills Acquired

### PROGRAMMING LANGUAGES:



### OPERATING SYSTEMS & DISTRIBUTIONS:



### APPLICATIONS & FRAMEWORKS:



### DATABASES:



## References

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