# Amar Lakshya

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'A Chemical Computer computing on Digital Computers'

# **Projects & Contributions**

FOS - MADE TO BE OPEN: 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.



## TRYINGTOKNOWYOUBETTER: github.com/amar-laksh/TryinToKnowYouBetter

• The Indian Election Commission's website leaks data that can be analyzed to effectively locate all reqistered voters.



### STUDY OF CAPTCHAS: 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

- 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

- 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

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



## FocusTV: github.com/amar-laksh/focustv

 An extremely responsive face detection system which automatically pauses Media(YouTube and VLC Media Player) when you aren't looking.

# 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.

# 2017

### July 2017 - Sept 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 functionalites using Python, Bash, and Ruby.

# **Publications & Certifications**

COMPTIA SECURITY+ CERTIFICATIOn: 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.

CROSSED & KNOTTED: 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.

BEYOND GOOD AND EVIL: amar-laksh.github.io/2017/06/17/beyond-good-and-evil.html

A paper focusing on the futility of recognizing Good and Evil as deterministic forces in the world.

# Education

2019

2015

2017

2014 - 2017

2015

2014

Msc. Cyber Security, - 2019-2020 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

CLASS REPRESENTATIVE: St. Xaviers College, Mumbai - Autonomous

• Worked to organize events like seminars and workshops for the BSc. I.T. batch.

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.

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:

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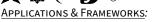






**OPERATING SYSTEMS & DISTRIBUTIONS:** 







### References

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