

# Prakash Ratna Prajapati

**Address:** Shreejananagar, Bhaktapur

**Phone:** +977 9841367801

**Email:** [prakashratnaprajapati@gmail.com](mailto:prakashratnaprajapati@gmail.com)

**Site:** <http://paxprz.herokuapp.com>

[www.stackoverflow.com/users/5611227/pax](https://www.stackoverflow.com/users/5611227/pax) [www.linkedin.com/in/paxprz](https://www.linkedin.com/in/paxprz) [www.github.com/paxprz](https://www.github.com/paxprz)

## PROFESSIONAL SUMMARY

Honors student with a record of academic and extracurricular success. Academic credentials are reinforced by programming experience gained during personal and academic projects. Known as creative, hardworking and ability for multitasking.

## WORK EXPERIENCES

09/2019 - 10/2019

### Leapfrog Technologies (Software Developer Internship)

Activities:

- Developing responsive web pages using HTML and CSS2.
- Manipulating DOM elements using javascript.

01/2020 - Now

### Cynical Technology (Security Analyst)

Activities:

- Security testing of websites and apps.
- Detecting system configuration issues and reporting.

## EDUCATION

2015 - 2019

**Bachelor's Degree in Computer Engineering**, Kantipur Engineering College, Lalitpur. (80.86%)

2013 - 2015

**+2 Science**, Capital College and Research Center, Koteswor. (80.9%)

2000 - 2013

**SLC**, Jaycees Secondary School, Bhaktapur. (85.13%)

## SKILLS

**Programming Languages:** C, C++, Java, Python, Javascript.

**Frameworks:** Django, Hyperledger Composer, Flask

**Linux:** Shell commands, Scripting, File system

**Machine Learning:** PyTorch, Keras

**Server:** Apache2, nginx

**Web Scraping:** Scrapy, BeautifulSoup

**Tools:** Docker, Git

**Database:** MongoDB, Postgresql

**Cyber-security:** Web Pentest, VAPT, Basic forensics

**Graphics:** Photoshop

## EXPERIENCE / ACTIVITIES

### Linux Training

Training bachelor students on linux kernel, distros, shell commands and shell scripting.

### Ethical Hacking & Forensic Investigation

Training organized for Nepal Police with hands on tools for hacking and digital forensic investigation.

### Cyber-security Webinars

Attended various cybersecurity webinars as a speaker.

### KEC Computer Club

2 years membership in the club, conducting various activities as well as LITE Technical Exhibition annually.

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## PROJECTS

### FaceFilter - Javascript Project:

Implementation of Haar Cascade technique developed by Viola & Jones to detect human face in image only using Js. Then, user can select face(s) and add available filters to it. Live demo link at:

<https://paxprz.github.io/Haar-Face-Detector>

### Firefly responsive webpage - HTML & CSS project:

Design project at leapfrog using HTML and CSS2. Live demo link at:

<https://paxprz.github.io/firefly-responsive-web>

### Hastakshar - Academic Major project (Django):

Offline signature verification system using CNN (Keras & Tensorflow). The trained weights metadata are then stored in blockchain network implemented using Hyperledger Composer. System was developed in Django with web interfaces. Only allowed users can verify signature of a signee while the signee gets notified of those actions. I tested with many CNN architecture, mostly created by myself. Training was done in Nvidia-1050Ti using Tensorflow-gui. Many steps of image pre-processing were carried out including grayscaling, noise reduction, resizing, etc using numpy and opencv library.

### DrSewa - Django Application:

Doctors and patients informations are stored in blockchain network implemented using hyperledger composer. Only consulted doctor can view all reports of patients. Patient can set an appointment with the doctor and consult with video conference implemented using WebRTC.

### DrCall - Django Application:

The concept of this application is same as DrSewa. But this time, the system was built from scratch using only class based views and mixins. The database used was Postgresql. For video chat, I implemented zoom api.

### Image Processing Toolkit - Python project:

Basic image processing functions like grayscaling, power-law, brightness, contrast, filters, etc implemented in python. Tkinter was used for GUI.

### Secret Notice - Java & Android project:

Encrypts messages using caesar cipher algorithm and converts the encrypted text to QR code. User with valid password can only decipher message from QR code. Swing framework implemented for

GUI. I used zxing library to generate QR for desktop application.

**Travel Partner** - *Android project:*

Android app with complete package for tourists visiting Nepal in 2020. Provides speech translation from various languages using Yandex API, currency conversion using Fixer API and google map searches for nearest hotels.

**Asteroid Smash** - *Android game in unity:*

Implementation of reinforcement learning using ML-Agents to train enemy ship.

**Chatbot** - *C project:*

Program searches for a set of strings in user input and generates output based on it.

**Library Management System** - *C++ project:*

Management system for library using Standard Template Library and file handling.

**RansomTest** - *Light version of ransomware:*

Program developed in python that mimics the action of ransomware and encrypts the images present in working directory using AES.

4096 bit RSA key was used for public key encryption.

Crypto.Cipher.AES and rsa modules were implemented.

<https://github.com/PaxPrz/RansomTest>

**Eminence** - *Python Hacking automation tool:*

Eminence project is developed in python to test a few vulnerabilities available in Metasploitable 3. It consist of scanning tool, information gathering, dictionary attack and command injection to gain access to metasploitable 3 environment.

<https://github.com/PaxPrz/eminence>

*\*\*Other projects are available in github profile*

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**ACHIEVEMENTS**

Best student award in Engineering Drawing, KEC, Lalitpur.  
3rd place award in ITMeet v8 Hackathon for Travel Partner.  
Best code award in Sagarmatha Hackathon for DrSewa.

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**CERTIFICATIONS**

Certified Ethical Hacker (Neosphere)

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**INTERESTS**

Cyber-Security  
Artificial Intelligence  
Blockchain

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**REFERENCES**

References available on request