

SHREYANSH KHAJANCHI

Engineer | CERN | Observe.AI | GSoC | Open Source Developer

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EXPERIENCE

Software Engineer

Sept'19 - Present

🔗 European Organization for Nuclear Research (**CERN**)

Switzerland

- Wrote **formal specifications** and implemented **Django-REST** based backend and **Python-Click** based Command Line Interface (CLI) tools to track CERN CSIRT's **computer security events** for its **40,000+ users** and **10,000+ workstations**
- Audited and **penetration tested** Programmable Logic Controllers (PLC)
- Contributed to CSIRT's CERN wide logging infrastructure migration efforts by implementing and deploying **Apache Flume**

Site Reliability Engineer

Jan'19 - Jul'19

🔗 Observe.AI - YC W18

India

- Implemented a **multi-slave Jenkins** instance and maintained **continuous integration and deployment (CI/CD)** system
- Administered company infrastructure on **Amazon Web Services (AWS)** and **Google Cloud Platform (GCP)**
- Contributed to **ISO 27001 certification** process by implementing Cloudtrail logging, Cloudwatch alarms, AWS's Session Manager, AWS Identity & Access Management (IAM) security policies, OWASP ZAP and SonarQube; and by unlocking **10+ new customers** and **\$450,000+** in revenue
- Implemented **3rd party integration** with Zoom.us in the core business product
- Moved multiple **core services** to **CI/CD** pipelines with Git, Docker, Jenkins, Portainer

... +2 at 🔗 RedCarpetUp - YC S15 and 🔗 Debian - Google Summer of Code (**GSoC**)

PRODUCTS AND PROJECTS

Django Forwarded

🔗 *GitHub: django-forwarded*

Wireless targeted MITM

🔗 *Blog: MITM with Linux*

BootTorrent

🔗 *GitHub: boottorrent*

Reproducible Linux

🔗 *Blog: Reproducible Linux*

Sane DotFiles Manager

🔗 *GitHub: sdf*

Flask Firehose

🔗 *GitHub: flask-firehose*

... and many more

- Support **HTTP "Forwarded"** header in your **Django** applications
- Used by **CERN CSIRT** in production internet-facing applications
- **Identified** and **exploited** network vulnerability to execute **Man-in-the-middle (MITM) wirelessly**
- **Captured** VIT University's management & faculty **credentials** granting **full access**
- **Responsibly disclosed** the attack vector + details and **suggested a solution**
- Developed a distributed **Peer-to-peer (P2P) network booting** solution with **BitTorrent** and **Preboot eXecution Environment (PXE)**
- Distributed network booting of **VMs** or **physical** systems on Beowulf clusters
- Developed tools and outlined ideas to **create 100% reproducible Operating Systems**
- Effortlessly **version control** your user **profile** (\$HOME) directory
- Used by **NixOS** community to achieve fully reproducible computers
- **HTTP/2 Server Push** support for **Python Flask**
- Used by **Mozilla** WebCompat team in production internet-facing applications

EDUCATION

Bachelor in Computer Science

Vellore Institute of Technology (VIT), India

SKILLS

Programming

| Python, Golang, Java, SQL, C/C++, Rust, JavaScript, Groovy, Bash

Development Tools

| Git, Docker, Vagrant, Ansible, Nix/NixOS, Jenkins, Portainer, Python Click

Web Development

| Django, Flask, Go Echo, Vue, Bootstrap, Spring Boot

Database

| PostgreSQL, SQLite, Redis, MySQL, MongoDB

Languages

| English, Hindi, Marwari

OTHER INVOLVEMENTS

- **Open source contributor** at: 🔗 CERN, Debian, MellowPlayer, Hugo, Coder, NixOS
- Successful participant in **Digital Ocean Hacktoberfest 2019**
- Attended the **36th Chaos Communication Conference (CCC)**
- Core member at **OWASP**, VIT. Promoting secure coding practices in web tech
- Previously an **Arch Linux contributor** and maintained software packages