Boudhayan Gupta

Kolkata (India), available for relocation worldwide

Nationality Indian

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PREFERRED ROLES	Software Developer, DevOps Engineer, System Administrator

PROFESSIONAL EXPERIENCE

June 2016 - July 2016

1mg Technologies Pvt. Ltd. 1, MG Road, Sector 14, Gurgaon, India
Intern, DevOps Engineering

1mg, formerly HealthKartPlus, allows people to research and buy prescription drugs online through a website and mobile apps for various platforms. As an intern working on **deployment and testing automation**, I streamlined their release process, enhanced the security and modularity of their server set-up, and worked on **reproducible builds** and **auto-scaling**. I worked on infrastructure hosted on the **Amazon AWS** cloud, and used **Ansible** and **Docker** as my primary tooling.

June 2016 - Present

KDE e.V. Schönhauser Allee 6/7, Berlin, Germany
Member, System Administrator Working Group (unpaid position, work from home)

KDE e.V. is a registered non-profit organisation which represents the KDE Community (a worldwide community of open source software engineers, artists, testers and translators) in financial and legal matters, and provides infrastructural support.

As a member of KDE e.V. and part of the System Administrator Working Group, I work on the following:

- Managing a network of servers spread worldwide, and the strategic positioning of server assets to maximise their geophysical spread.
- Managing a heterogeneous **Git** and **Subversion** mirror network, consisting of a read-write server, various read-only mirrors spread worldwide, and a mirror of all Git repositories on GitHub
- Negotiating sponsorship deals for infrastructure support with companies, including hosters, cloud server providers and CDN networks.

EDUCATION AND TRAINING

Graduation (expected) in 2017

Bachelor of Technology, Computer Science and Engineering
NIIT University, Neemrana

CGPA (as of August 2016): 6.51

Selected Courses: Computer Programming in C, Object Oriented Programming in C++, Data Structures and Algorithms, Analog Electronics, Microcontrollers and Microprocessors, Advanced Embedded Systems.

Graduation in March 2013

Shree Bharati (now Birla Bharati)
Central Board of Secondary Education

Class X (2011): CGPA 8.8 (83.6%, Science 9.0, Math 9.0)
Class XII (2013): 75.8% (Computer Science 91%, Physics 75%)

PERSONAL SKILLS

Technical

Highly proficient in C++, Qt and QML, Python, and C, familiar with JavaScript and Java, Fortran, x86, 8051 and ARM unified assembly.

Primarily a Qt5 (C++) and Python3 based developer, I also have good command over UNIX-like systems, and can effectively manage Linux and BSD systems and distributed server infrastructure.

As a DevOps engineer, I'm intimately familiar with Git including its internals. Also familiar with Ansible, Docker, LXC, Redis and RabbitMQ, and shell scripting.

Languages

English (Native), Hindi (Professional), Bengali (Professional)

Communication

I have extensive experience collaborating with a multicultural (primarily Western European, US and Indian) community, an environment in which I am extremely comfortable.

Hobbies and Interests

I enjoy reading and quizzing, and I love travelling. I am fascinated by foreign languages and try to learn a few from time to time.

I like electronics, and am especially interested in audio electronics, and have designed analog audio equipment (USB DACs and headphone amplifiers) as a hobby.

PROJECTS

December 2015 - Present

Propagator Python3, RabbitMQ, GitPython

An utility to manage a fleet of heterogeneous Git mirrors, to keep create, rename and delete operations in sync, and to automatically push new commits to mirrors with minimal delay.

https://github.com/KDE/propagator/

March 2015 - Present

Spectacle C++, Qt5, KDE Frameworks 5

An advanced screenshot utility for the KDE desktop, released as part of the triannual KDE Applications release, replacing the 14 year old KSnapshot.

https://github.com/KDE/spectacle/

October 2014

Dennis C++, Qt5

A local DNS proxy, which translates UDP requests on the local side to TCP requests on any outbound port on the remote side, and vice versa, created to subvert DNS-based Internet censorship.

https://github.com/BaloneyGeek/dennisng/

Others

KDE Community 2015 - Present

As a contributor the KDE Community, I manage the following:

1. I maintain Spectacle, the screenshot utility.
2. I manage their source code management server network (consisting of Git and SVN servers and mirrors).
3. I mentor new entrants to the community, as well as students under various mentorship programmes.

Google Summer of Code 2016, Mentor May - August 2016

As a mentor in Google Summer of Code 2016 for KDE, I mentored a student who is building a mechanism to select files from discontinuous locations together in order to be able to copy, move or delete them together.

Freelance Software Developer 2013 - Present

Starting as a freelance software developer while in high school, I have worked on contract for several companies.

- For **L2C2 Technologies**, an independent consulting firm specialising in library management systems, I wrote a WordPress theme for the main website for The West Bengal Public Library Network.
- For **IL&FS Education & Technology Services Ltd.**, I designed a prototype of a bill collection system for the state telecom operator's rural bill payment centers. The application was developed using Python, Tornado and PostgreSQL.

TALKS AND CONFERENCES

March 2009   **Open Source India - Tech Days 2009**, Chennai Trade Center, Chennai

- **How a 14-year Old is a Full-time Linux User** – a FOSS for Everyone success story, delivered when I was 14.

November 2010   **OSSCamp 2010.11**, Jaypee Institute of Information Technology, Noida

- **Remote Control Your Computer with SMS, using Twitter as a Gateway** – demonstrating an application architecture and Python code for accomplishing the same.

October 2013   **Open Source India Days 2013**, NIMHANS, Bangalore

- **Realtime Browser-Server Communiactions with HTML5 WebSockets** – a tech-review and live-coding session demonstrating how to build realtime web applications with WebSockets.

March 2016   **conf.kde.in**, The LNM Institute of Information Technology, Jaipur

- **How KDE Does Git** – a behind the scenes look at KDE's vast server and project management infrastructure
- **The Story of Spectacle** – how to start contributing to the KDE Project and end up being a maintainer

September 2016   **QtCon 2016**, Berlin Congress Center, Berlin

- **Have You Tried Turning if Off and On Again?** - A status update on KDE Sysadmin's work over the past year, future plans for the Identity service, and updates to the Git and SVN infrastructure

RESEARCH

February 2016   ***A replay-attack resistant message authentication scheme using time-based keying hash functions and unique message identifiers**, Boudhayan Gupta.*

arXiv:1602.02148 [cs.CR]

An extension of Hash-Based Message Authentication Codes with time-dependent keys, providing provable security against replay attacks.