Vimalkumar Velayudhan

Software and Web Developer with System Administration skills

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Technical Skills

Python

Web application development using Flask (scienceformat), Jinja2 templates, GUI development using PyQt (ITQuery and ITCrispr). Automation using Fabric (example). Zope 2, PyCharm IDE, PyPI. Virtualenv and virutalenvwrapper.

Databases and SQL

Relational Database design, Use of ORM (SQLAlchemy). Alembic database migrations. Database administration - previleges, user administration, backup/restore, master-slave replication of Postgres using Slony1. Connections using ODBC.

Node

Familiar with the usage of NodeJs, NPM, Grunt. Developed a plugin for etherpad-lite to insert text from an external JSON source.

Web Development and Design

HTML, CSS, Twitter bootstrap customization (1, 2), LESS, JSON, JSONP, XML, Ajax calls JavaScript, jQuery and plugins (ex. selectize.js). Webfonts and use of icon fonts. Media queries. Knowledge of Gimp, Inkscape, Pencil for creating images and mockups.

Mobile

Building apps using AngularJS/Ionic framework (PlanOnce) and Sencha touch ExtJs (Citebot). Cordova/PhoneGap integration for additional features.

Version control

Git and github usage. Deploying websites using git.

Other

Payment processing integration using stripe, Integrating share feature, ads in mobile web applications (Citebot). Knowledge of Markdown, reStructuredText, pandoc. Amazon EC2/DigitalOcean server setup and hosting. Blogging using Pelican, Ghost. ColdFusion - development and debugging (basic).

Operating systems

Linux installation, user/group management, Partitioning and LVM management, Sharing file system using NFS, LDAP, Samba, FTP, SSH server configuration, Firewall configuration (iptables), Apache configuration including virtualhosts, SSL configuration, Tape backups. Building ISO's and RPM packages. Familiar with SLES, Arch Linux, Debian/Ubuntu, Centos, Redhat/Fedora distributions. High availability clustering using

Novell cluster services (2-node). Nagios monitoring setup. Postfix configuration for email delivery.

Windows Server - Active directory, DNS, VPN (PPTP), Terminal services, Windows XP/7.

Experience

Current: Developer, scienceformat

scienceformat is a manuscript preparation and bibliography management service for Science.

Mar - May 2014: Web developer, Teamwork.com

Implemented the first version of a feature for importing tasks and task lists from Microsoft Excel files.

2007 - 2012: Research Program Manager

Mark Achtman Group, Environmental Research Institute, UCC, Cork, Ireland.

Developed an API in Python for allowing public access to data. Designed administration interfaces in HTML for updating tables and adding/removing columns.

Developed graphical user interfaces in Python and Qt for visualizing and managing data in LIMS systems and BioNumerics.

Maintained and continued development of a Python Zope 2 website (http://mlst.ucc.ie) for MLST data submission. Assisted registered users (~1000) with queries relating to data submission and curation.

Administered database servers and managed databases. Setup master-slave replication of a Postgres database for development and backup purposes.

System administration of 5 servers (4 Linux, 1 Windows), 20 Windows workstations and a 3 Terabyte Fibre-channel connected SAN.

Setup integrated authentication of the entire network of Linux, Windows server and clients.

Novell network administration - LDAP, iFolder file synchronization and cluster services.

2005 - 2007: Faculty in Bioinformatics

Jain Institute of Vocational and Advanced Studies, Bangalore, India.

Setup a network of 10 Linux computers, an e-learning coursework using Moodle and conducted tests using a PHP based test software.

Developed a PHP based software for simple Lineweaver-Burke plots (biograph).

2004 - 2005: Private Instructor

National Biotechnology Entrance Examination, Coimbatore, India.

2002 - 2004: Lecturer in Biotechnology

PSG College of Arts and Science, Coimbatore, India.

Publications

1. O'Farrell B, Haase JK, Velayudhan V, Murphy RA, Achtman M (2012) Transforming Microbial Genotyping: A Robotic Pipeline for Genotyping Bacterial Strains. PLoS ONE 7(10): e48022.

2. eBook - DIY: Host Your Statically Generated Blog In The Cloud, *a step-by-step guide*

Conferences

- PyCon Ireland 2011: Delivered a tutorial on beginning GUI design using PyQt.
- PyCon Ireland 2010 - participant.

Education

1999 - 2001: Master of Science, Biotechnology

Madurai Kamaraj University, India.

References on request