VARUN B PATIL

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ABOUT ME

Python and C programmer with 6 years of large scale software development and deployment experience in a wide variety of domains including kernel and embedded systems, storage and filesystems, RAID, data analytics, data science and machine learning.

EXPERIENCE

Jul 2014 - present   Software Engineer @ NetApp, Bangalore

Responsibilities

- Working on storage efficiency technologies like data compression, compaction and deduplication for WAFL (NetApp's proprietary filesystem), constantly improving the filesystem layout to reduce dollar/gigabyte and provide faster data access for NetApp's customers.

- Exploring and prototyping state-of-the-art algorithms in data compression for better storage efficiency as well as improved read/write performance.

- Using data science and machine learning techniques to gathering and analyze vast amounts of storage efficiency and performance data from NetApp's customers via AutoSupport to proactively identify customers and clusters with less than optimal efficiency and performance and then suggest settings and tweaks to improve storage efficiency and performance.

- Implemented efficient, user friendly, fault tolerant and high performance storage/disk provisioning algorithms and reporting including simulations for the RAID subsystem. Also developed summary and reporting API's for NetApp's GUI management tools like "OnCommand System Manager".

- Involved in the design and development of NetApp's cloud backup and restore services including cross-cluster, cross-version and cross-product restores while completely preserving storage efficiency in the cloud. Implemented object caching layer for the cloud backup feature in WAFL to reduce number of reads to third-party object stores (like Amazon S3) thereby reducing customer's restore-from-cloud costs.

- Authored the initial version of Space Savings Estimation Tool (communities.netapp.com/docs/DOC-18699) which is a Windows and Linux CLI tool that can be run by customers to estimate the space savings they can expect if they decide to purchase NetApp data storage systems. The tool also helps NetApp's sales and customer support folks showcase NetApp's storage technologies and gather feedback from the customers.

Awards

- *"Spot award"* for my work towards automation of unit testing in Data ONTAP using CxxTest and Python.
- *"Customer Champion"* award for my work on the Space Savings Estimation Tool (SSET) and gzip compression support for Yahoo.

Jul 2012 – Jul 2014   Software Engineer @ Cisco, Bangalore

Responsibilities

- Developed the video pipeline for the Cisco TelePresence SX10 product including integration of video codecs like H.264 and H.263.
- Worked on upgrading the TI-OMAP4 Ducati subsystem firmware.

Open source work

- Contributed bug fixes and test cases to the Cisco/Mozilla OpenH264 project (github.com/cisco/openh264/graphs/contributors).

SOFTWARE PROJECTS

Personal website   varunbpatil.github.io

(more information on my current interests and projects)

Used : Jekyll, Git, HTML / CSS, Markdown.

PyCCTV   Source code: github.com/varunbpatil/PyCCTV

Blog: varunbpatil.github.io/2018/11/26/PyCCTV.html

A CCTV camera application with "person" detection and remote monitoring over Wi-Fi.

Used : Python, Flask, Deep Learning with Keras, Yolo V3, OpenCV.

HoroscopeFS   Source code: github.com/varunbpatil/HoroscopeFS

Blog: varunbpatil.github.io/2018/06/24/fusepy.html

A virtual filesystem to aggregate daily, weekly and monthly horoscopes from multiple websites.

Used : Python, FUSE, Beautiful Soup, requests.

OTP Scanner   Source code: github.com/varunbpatil/OTP_scanner

Blog: varunbpatil.github.io/2018/01/28/OTP-scanner-1.html

Application to scan one-time-password (OTP) generated by a mobile app using the laptop's webcam and use the OTP to automatically login to another application.

Used : Python, OpenCV, tesseract OCR, GUI automation using pyautogui.

Coursera Video Downloader   Source code: github.com/varunbpatil/Coursera_Video_Downloader

Blog: varunbpatil.github.io/2018/01/09/coursera_video_downloader.html

Legally download high resolution course videos from Coursera for an entire course into a nice directory structure.

Used : Python, Selenium.

SOFTWARE SKILLS

Proficient: Python, C, GNU/Linux, Machine Learning, Deep Learning, TensorFlow, Keras, scikit-learn, Pandas, NumPy, Scrapy, Git

Familiar: OpenCV, HTML / CSS

CERTIFICATIONS

Machine Learning by Stanford University on Coursera

Deep Learning specialization by deeplearning.ai on Coursera

(certificates viewable on LinkedIn – in.linkedin.com/in/varunbpatil)

EDUCATION

2008 - 2012   **Bachelor of Engineering in Computer Science @ SJCE, Mysore**

- 9.9 cumulative GPA (Received "TCS Best Student Award" for highest GPA in my batch).
- Common Entrance Test state ranking of 7.