

BHARATHKRISHNA GURUVAYOOR MURALI

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Highly motivated programming enthusiast with full stack experience and industry exposure, ambitious to write code that brings positivity to the people around

EDUCATION

- ★ **Stony Brook University, New York** 08/2016 - Present
Master's Degree in Computer Science
- ★ **College of Engineering Trivandrum, Kerala University** 07/2010 – 04/2014
Bachelor's Degree in Computer Science **CGPA - 8.58/10**

WORK EXPERIENCE

HEWLETT PACKARD - R&D Engineer, Big Data Domain 08/2014 – 07/2016

- ★ Formulated and developed a trigger technique for executing HP Data Protector tests which automatically generates configurations and prepares the environment using a web interface, resulting in 95% reduction of manual work – Java, Perl.
- ★ Automating the execution of test cases using EATE – a Perl based tool. Developed a web-based reporting system for test cases using PHP and MySQL.
- ★ HP Teamsite - Web content management product used for market optimizations. Involved in fixing critical performance issues and developing REST services. Worked on search, user specific targeting and deployment modules, writing backend APIs in Java.
- ★ HPE Elements - UI framework for HPE big data division. Developed various graphs, tables, data representation and analytic models like social charts, partition maps and dynamic components from scratch using Angular JS, JQuery and CSS.

PROJECTS

SURVEILLANCE SYSTEM USING FACE RECOGNITION (C++, OpenCV, PHP)

- ★ Performs face recognition using a camera and compares it with the faces already stored in Raspberry Pi.
- ★ Trains faces using Bayes classification and recognition done using Haar Cascade classifiers and comparing Histogram Patterns.

PER PROCESS SYSTEM CALL VECTORS (C , Kernel Programming)

- ★ Can de/register multiple system call vectors, through a kernel module.
- ★ When process forks, it inherits the system call vector from parent. Includes an ioctl that can change the system call vector used by a running process.

LINUX FILE SYSTEM TO TRACE OPERATIONS (C , Kernel Programming)

- ★ A filesystem 'trfs' which captures records of file system activity for a number of file system operations and logs it to a file in user-space so that user can replay the commands in sequential order.
- ★ Additional module to issue ioctl(2) calls to trfs to set the bitmap of which f/s methods to trace.

MUSIC GENRE CLASSIFICATION (Tensorflow, Python, Librosa)

- ★ Learns music patterns from training data using MFC and Mel spectrogram.
- ★ Given music sample is mapped using neural network ML algorithms and classified to the best matching genre.

WEB APPLICATION FIREWALL (Python)

- ★ Implemented a reverse proxy to intercept all the requests to the server, which has training and testing modes.
- ★ Collects information and learns from it during the training and filters requests in the test phase to detect attacks.

PROGRAMMING EXPERTISE

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|--------|-------|-------------|-------------|-------------|
| ★Java | ★C | ★C++ | ★Python | ★Angular JS |
| ★MySQL | ★PHP | ★Javascript | ★JQuery | ★HTML |
| ★CSS | ★Perl | ★JUnit | ★Phantom JS | ★Node |

DEVELOPMENT TOOLS

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|------------|-----------------|-----------|-----------|-------------|
| ★Windows | ★Linux | ★Raspbian | ★Perforce | ★GIT |
| ★Bootstrap | ★Elastic Search | ★Selenium | ★REST | ★Tensorflow |