Varad Belwalkar

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Education

**Bachelor of Technology, D Y Patil college of engineering and technology, Kolhapur**  2020- Ongoing

**Major**: Computer Science and Engineering

Publications and Contributions

**Custom IPC-Protocol** 2022-ongoing

Engineered a **custom IPC protocol** for leveraging fast communication between

Achieved throughput around **x%** more compared to traditional **TCP Sockets**

**Load Balancing standalone docker engines**  2022-ongoing

Engineered a custom **load-balancer** in **Go** to facilitate the load balancing on multiple nodes through docker engines

Provided **abstraction** on the manager-node client so as if containers are running natively

**Performance improvement in the web server’s multithreading model**

Engineered a protocol to enhance the multithreading performance of multithreaded web servers by reducing the memory requirement by about **x%** by clustering various platforms together.

Projects

**Scalable Platform as a Service**| *Distributed Systems*

Built an **auto-scaling** container-based PaaS framework by implementing **NGINX** **reverse-proxy** to **load-balance** and to build the entire system from standalone docker engines controlled by replicated **Django-server**

Provided a **deployment platform** where developers can deploy their websites and applications with just **One** command. Implemented **auto-configuring** clients for Linux and Windows systems and SSL verification and encryption from the client side

**Application** | *CI/CD implementation*

Built a \_\_ application to learn the CI/CD pipeline workflow through **Jenkins**

**APPLICATION** | *.NET Core*

Built a cross-platform <APPLICATION>

**De-duplicating file system using FUSE** | *Operating Systems*

Implemented FUSE in python to deduplicate custom file system over the kernel and reduced data storage size requirement

**Container access through Android**| *Android* *Development*

Developed a User-Friendly Android Application to get access to the Linux terminal and from the server implementing the PaaS framework

**Brownie** | *Blockchain Technology*

Implemented **solidity** contract and deployed on test network (***Rinkeby***) using Brownie python Framework

**Interpreter** |*compilers*

Built an interpreter that can interpret a subset of the python language

**Web-server** | *languages*

Built a multithreaded highly concurrent static file serving web-server implemented in C++

Technical Skills

**Languages**: C/C++ (Proficient), Python (Proficient), Java, JavaScript, Bash, SQL, PHP, Go

**Software Tools**: git, GitHub, Docker, Jenkins, Wireshark

**Databases**: MySQL, PostgreSQL, MongoDB

**App/Web** **Development**: HTML5, CSS3, JavaScript, ReactJS, NodeJS, Django

**Platforms**: Linux and Windows

**Web servers**: Apache, Nginx

Position and Responsibility

Carried lectures on Linux fundamentals and Linux Intermediate and gave in-depth workflow of Linux from the booting process to managing files, package installations, stability issues in some distros, etc.

Carried out **Linux-Wargames** and encouraged students to take deep dive into the Linux world