RADHA GULHANE

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EDUCATION

The Ohio State University   **Aug 2022- May 2024**
Master of Science - Computer Science & Engineering   GPA: 3.6/4
- Coursework: High-Performance Deep Learning, Advanced Operating Systems, Intermediate Studies in Computer Networking, Algorithms, Introduction to Data Mining, Data Visualization

Vishwakarma Institute of Technology, Pune, India   **Aug 2017 - June 2021**
Bachelor of Technology – Computer Engineering   GPA: 9.77/10
- Coursework: Advanced Data Structure, Database Management Systems, Design and Analysis of Algorithms, Artificial Intelligence

EXPERIENCE

Intern - Software Developer | Seagate Technology, Longmont, CO, US   **May 2023 - Present**
Technologies: Go, Prometheus, Grafana, Docker, Kubernetes

- Developing a platform that **visualizes the status of memory usage** in a cluster, allowing for monitoring and analysis of its health.
- Implementing a **cross-compilable Golang agent** that serves as an exporter for the system's memory statistics and configure it with Prometheus and Grafana to facilitate seamless integration and data visualization

Software Engineer - Cloud Systems | Seagate Technology, Pune, India   **July 2021 - July 2022**
Technologies: C, C++, Python, Docker, Kubernetes, Multithreading, Parallel Computing

- Contributed to **an open-source, cloud-distributed storage,** CORTX, by designing and developing *state-of-the-art persistent B+ tree* to optimize the meta-data object storage engine. [codebase]
- Assisted memory limit feature to reduce primary *memory consumption from 95% to acceptable levels* in absence of swap space
- Achieved performance improvement of up to **30% read and 10% write object** in case of direct addressing (i.e., the object will reside in node) and *60% read object* for indirect addressing (i.e., the node will hold the address of object)

Intern - Cloud Storage | Seagate Technology, Pune, India   **July 2020 - June 2021**
Technologies: C, C++, Python, Django, MongoDB, Splunk

- Led proof-of-concept to provide optimal object storage over in-used B tree, which involved research *on B+ tree and B-epsilon tree* data structures
- Integrated Splunk software with a Lyve cloud object storage to test compatibility and performance analysis (such as throughput, latency, and memory consumption)

TECHNICAL SKILLS

Programming Languages: C, C++, Go, Java, Python
Web Technologies: ReactJS, NodeJS, Express, Django, HTML, CSS, JavaScript, Spring, Hibernate
Other Technologies: MongoDB, Oracle, SQL, Docker, Kubernetes, Distributed Training for Deep Neural Networks, PyTorch, Horovod, TensorFlow, Tableau, D3.js, Splunk, GitHub, CI/CD tools, Jenkins, Linux, Shell Script, VS code, IntelliJ

PROJECTS

Scalable Implementation of Distributed Deep Learning Techniques   **Jan 2023 – Present**
Technologies: Python, Distributed Deep Learning, PyTorch, Horovod

- Working towards the *scalability of Distributed Deep Learning techniques*, including data parallelism, model parallelism, and hybrid parallelism, along with new improvements for performance
- This project involves understanding advanced *Distributed Deep Learning model implementation*, *multi-GPU training* and *open source* implementation

ERP Software for Farmers, sponsored by IEEE   **Jan 2020 - May 2020**
Technologies: Grails framework, Groovy programming language, MongoDB

- Devised a project to overcome the *problem of huge price margins* between the selling and buying of the crops
- Built a web application to connect farmers straight with their customers to *avail of direct benefits*
- Facilitated farmer's work by providing weather forecasts and information about nearby farming equipment retailers

LAN Examination System   **Aug 2019 - Dec 2019**
Technologies: Java, Oracle database, Socket Programming, Multithreading, Swing application framework

- Built an end-to-end *secure system* to conduct the online examination in a LAN environment
- Architected and developed the client-server modules responsible for data **authentication, storage,** and handling multiple client **requests concurrently**.

Edushare – The Academia Assist   **Sep 2019 - Dec 2019**
Technologies: NodeJS, ReactJS, Express, MongoDB

- Developed a platform where university students can share their academic work and experience with peers
- Provided functionality to support access of extensive files using MongoDB GridFS even *larger than 16MB*

CO-CURRICULAR ACTIVITIES

- Selected for the competitive **Google CS Research Mentorship Program**
- Secured a position in the final round of the **Western Union Hackathon** with a team of 4
- Certified in **C** (A+ grade), **C++** (A+ grade), **Java** (A grade) verified by ISO