

Aprameya Bhat

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Professional Experience

Fanatics, Inc.

San Mateo, CA

SENIOR PLATFORM ENGINEER

July,2018 - Present

- Designed and developed a scalable, highly available real-time logging system using Zookeeper, Kafka, Elasticsearch, Graylog, and Druid for end-to-end production logging
- Built a cloud-native monitoring and alerting platform in Kubernetes with Helm, Prometheus, and Grafana for real-time insights and proactive issue resolution
- Created ETL pipelines using Vector, Redpanda Connect, and FluentBit for data enrichment, streaming, and ingestion
- Improved scalability and reliability of real-time production services managing large datasets across cloud and on-premises environments
- Developed data-intensive services with cloud and on-premises infrastructure, leveraging expertise in data processing, storage, and analytics

State University of New York at Binghamton

Binghamton, NY

RESEARCH PROJECT ASSISTANT

May,2017 - August,2017 & December,2017 - June,2018

- Optimized virtual machine performance by implementing virtual CPU scheduling and process pinning techniques, resulting in improved resource utilization and reduced overhead
- Enhanced hypervisor efficiency by developing a live replacement mechanism, minimizing hypervisor involvement in virtual machine operations and improving overall system responsiveness

State University of New York at Binghamton

Binghamton, NY

GRADUATE TEACHING ASSISTANT

August,2017 - December,2017

- Conducted research to improve virtual machine performance with increasing virtual CPU counts, exploring techniques for efficient resource allocation and utilization
- Taught and mentored students in Operating Systems and Systems Programming courses, conducting classes, exams, and grading assignments

Evry India Pvt Ltd

Bangalore, India

SOFTWARE ENGINEER ASSOCIATE

July,2015 - July,2016

- Designed backend infrastructure using C, ADO.NET, and MVC, building scalable REST APIs and writing business logic
- Developed user-friendly GUI in MVC model using JavaScript, HTML ensuring seamless user experience

Technical Skills

Languages

Python, Java, Go, C, Shell script, HTML, CSS, Javascript, JQuery

Other technologies

Kubernetes, Helm, Docker, Amazon Web Services, Zookeeper, Kafka, ElasticSearch, Druid, Graylog, Kafka-Stream, Prometheus, Grafana, Vector, Benthos, FluentBit

Publication

Overcoming Virtualization Overheads for Large-vCPU Virtual Machines

Milwaukee, WI

AUTHORS: OZGUR KILIC, SPOORTI DODDAMANI, APRAMEYA BHAT, HARDIK BAGDI, KARTIK GOPALAN

September,2018

- Published at "2018 IEEE 26th International Symposium on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems"

Education

State University of New York at Binghamton (Binghamton University)

Binghamton, NY

MASTER OF SCIENCE IN COMPUTER SCIENCE

August,2016 - May,2018

Visvesvaraya Technological University

Mangalore, India

BACHELOR OF ENGINEERING IN COMPUTER SCIENCE

August,2011 - May,2015

Projects

Hypervisor Optimization

Binghamton, NY

RESEARCH PROJECT WITH PROF. KARTIK GOPALAN & INDUSTRIAL TECHNOLOGY RESEARCH INSTITUTE, TAIWAN

March,2018 - June,2018

- Optimizing the Linux kernel to reduce the hypervisor involvement in virtual machines operations
- Working on reducing the hypervisor overhead in network transaction through VFIO and PCI-passthrough

Live Replacement of Hypervisor

Binghamton, NY

RESEARCH PROJECT WITH PROF. KARTIK GOPALAN, FUNDED BY NATIONAL SCIENCE FOUNDATION

December,2017 - June,2018

- Designing and developing a system with the goal to replace the running hypervisor with the new one on the go
- Replacing the running hypervisor with the fresh copy while eliminating the need to stop running virtual machine

Performance impact of increasing the virtual CPU count in virtual machines

Binghamton, NY

RESEARCH PROJECT WITH PROF. KARTIK GOPALAN

May,2017 - June,2018

- Developing with a goal to keep the performance of the virtual machine constant with increasing number of virtual cpus
- Aiming to increase the performance of the virtual machine by pinning the processes to the virtual cpus

Socket Programming

Binghamton, NY

DEVELOPED AT SUNY BINGHAMTON

October,2017 - November,2017

- Implemented Conference application with client server architecture
- Designed and developed Virtual network routing using Distance Vector routing algorithm
- Multi-threaded HTTP Proxy with Caching