



Aravindh Sampathkumar

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EDUCATION

CLEMSON UNIVERSITY
MS IN COMPUTER SCIENCE
Graduated Dec 2013 | USA

ANNA UNIVERSITY
BTECH IN
INFORMATION TECHNOLOGY
Graduated May 2007 | India

CONTACT

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SKILLS

Infrastructure and Ops

Linux and Unix Scripting
KVM & containers AWS & GCP
Monitoring Diagnosis
Storage admin(NFS, NetApp, Isilon)

SSH DNS Networking

Performance Engineering

Analysis Queueing theory
Benchmarking

Data Analysis & Visualisation

SQL Python Pandas Numpy
Plotly D3 HTML Datatables

Tooling and Automation

Python CLI tools Flask APIs

System design

Asynchronism Caching
Performance vs Scalability

PROFILE

Hej! I am a Computer Engineer based in Aarhus, Denmark with 10 years of experience and a background in Performance Engineering, Automation, Systems design and operation. I'm looking to take up the role of a System Reliability Engineer where I can leverage my systems skills.

EXPERIENCE

AARHUS UNIVERSITY | SYSTEMS ADMINISTRATOR
Aug 2017 – Current | Aarhus, Denmark

- **Sys Admin:** Managing a HPC cluster of 750 cores for a research group.

Achievements:

- Leveraged Ansible for automated administration of a fleet of compute nodes, and infrastructure services (Auth, DNS, Firewall, backups, database).
- Linux administration and management of daily activities.
- Configured a redundant and failure tolerant Isilon Cluster to serve as primary storage for the cluster.
- Built a Petabyte scale data recovery system based on FreeBSD and ZFS.
- Built a high-performance virtualized database system for storing genomics data based on KVM, DB2 and Huge pages.

In progress:

- Upgrading batch workload scheduler from PBS to SLURM.
- Upgrading to a secure MFA enabled SSH server based on Alpine Linux.

NETAPP INC | PERFORMANCE ENGINEER

Jan 2014 – Jun 2017 | Raleigh, USA

- **Performance Analysis:** Storage workload characterization, design and guidance of performance oriented projects – Data ONTAP, release performance.
- **Benchmarking:** Made use of micro benchmarks and specialized in custom workload generation with SPEC SFS 2014.
- **Tooling and Automation:** Developed easy-to-use CLI tools and Flask based web APIs for accessing and analyzing performance data. Experimented with mining performance data for behavior search.

Achievements:

- Analyzed and helped resolve performance issues reported by customers thereby aiding business continuity.
- Tools that I developed and productized are used by analysts and developers across the organization - saving time and improving efficiency.
- My work on improving parallelism and thread management resulted in improved product performance.

INTELLIGENT RIVER PROJECT, CLEMSON UNIVERSITY | BACK-END AND INFRASTRUCTURE ENGINEER

Jan 2012 – Dec 2013 | Clemson, USA

- **Infrastructure:** Designed and deployed virtualized infrastructure running clustered RabbitMQ, replicated and shared MongoDB and a polyglot application setup.
- **Back-end:** Part of team developing semantic middleware for streamed data.
- **Logs based intelligence:** Deployed an ELK stack for monitoring and added intelligence using Simple Event Correlator(SEC).

Achievements:

- [Intelligentriver.org] - Live monitoring and analyzing water quality at USA.



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FREE TIME INTERESTS

Self-hosted applications:

-> NextCloud

-> Static Website

-> Pi-hole

Online privacy

Tech news - Hacker News

LANGUAGES

English: Professional

Tamil: Native

Danish: Learning

German: Learning

HOBBIES

Wood working and furniture design

Traveling

Landscape photography

News - Politics and Tech

PERSONAL

Nationality: Indian

Age: 31 Years

Work permit: Job based permit in DK*

* Switching to EU partner based residence permit soon.

BANK OF AMERICA MERRILL LYNCH, (BA CONTINUUM LTD) |

SENIOR SOFTWARE ENGINEER

Feb 2011 – Aug 2011 | Chennai, India

- Developed a database-backed, financial document queuing application.
- Performed impact analysis, change management, and peer code reviews.

TATA CONSULTANCY SERVICES LTD. | ASST. SYSTEMS ENGINEER

Jan 2008 – Jan 2011 | Chennai, India

- Experimented with and administered hundreds of Linux Virtual Servers on IBM System Z.
- Benchmarked and presented several proof-of-concept architectures to banking and financial companies.

MASTER THESIS

VIRTUALIZING INTELLIGENT RIVER®

Dec 2013 | Clemson, USA

A quantitative and qualitative comparison of *KVM*, *Xen*, and *Linux Containers* based on their virtualization overhead, resource entitlement and isolation facilities, operational flexibility, scalability, and security.

[Publication on the web]

RESEARCH INTERESTS

PATTERN RECOGNITION AND EVENT CORRELATION

I am fascinated by the power of [Simple Event Correlator(SEC)] and would like to expand my understanding and research for formal methods of recognizing patterns, and chains of events eventually turning them into actionable events.

REFERENCES

Available upon request