



Aravindh Sampathkumar

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EDUCATION

CLEMSON UNIVERSITY
MS IN COMPUTER SCIENCE
Graduated Dec 2013 | USA

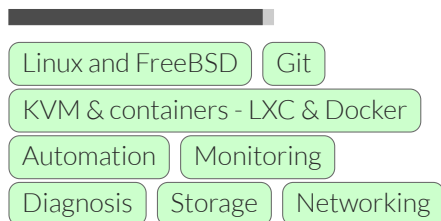
ANNA UNIVERSITY
BTech IN
INFORMATION TECHNOLOGY
Graduated May 2007 | India

CONTACT

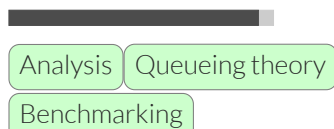
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SKILLS

Infrastructure and Ops



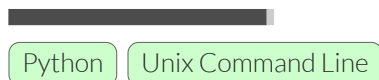
Performance Engineering



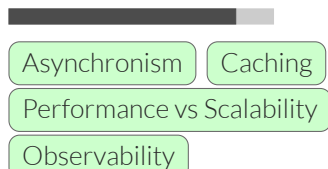
Data Analysis & Visualisation



Tooling and Automation



System design



PROFILE

A computer Engineer with 11 years of broad experience with building and operating IT infrastructure, Performance Engineering, and Automation.

EXPERIENCE

AARHUS UNIVERSITY | SYSTEMS ADMINISTRATOR

Aug 2017 – Current | Aarhus, Denmark

- From scratch, built and manage a Slurm based HPC cluster that supports over 140 researchers working on molecular biology and genetics.
- Managed capacity planning, product evaluation, hardware procurement, and installation for the new research cluster.
- Manage infrastructure as code with Ansible.
- Administering a fleet of CentOS/RHEL Linux servers (800 CPU cores).
- Planned and built several purpose-built [ZFS storage servers].
- Manage log intelligence using ElasticSearch, Beats and Kibana.
- Setup and operate a central identity system with MFA using FreeIPA and Duo.
- Built a high performance virtualised database system based on KVM, DB2 and Hugelpages for storing genomics data.
- Wrote [user guides and documentation] for users of the research cluster.
- Automating day-to-day system administration using Bash and Python scripts.
- Collaborate with and advice researchers on HPC work and performance.

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

Wood working and furniture design
Tech news - Hacker News
Online privacy
Traveling
Landscape photography

LANGUAGES

English: Professional
Tamil: Native
Danish: Learning
German: Learning

PERSONAL

Nationality: Indian
Age: 32 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