
Adarsh Liju Abraham

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Education

Bachelor of Technology, Computer Science

PES University | 2020 – Present

Relevant Coursework: Operating Systems, Computer Networks, Cloud Computing, Database Management Systems

Technical Skills

Programming Languages: Java, JavaScript, Python, C, C++, PHP, Shell (Bash), MySQL

Systems: Linux, SQL, Docker, Kernel Programming

Computer Fundamentals: DBMS, Operating Systems, OOPS, Web Development

Frameworks: Django, ReactJS

Languages: Malayalam, Hindi, English

Research Publications

Enhancing Disaster Response: A Study on SDN-Integrated Alarm and Alert Systems Using Cooja Simulations

Published at NKCON 2023 (IEEE)

- Assessed SDN-integrated alarm systems using Cooja simulations to improve disaster response efficiency.
- Compared RPL and SDN protocols, proposing solutions for IoT network challenges.

ONOS SDN Framework: Assessing the Impact of Single and Multi-Controller Architectures on Network Efficiency

Published at SmartCom 2024 (Springer)

- Analyzed ONOS and Mininet in SDN, comparing single-controller and multi-controller architectures.
- Evaluated performance metrics like latency, throughput, scalability, and fault tolerance.

Final Year Project

Harnessing the Power of Blockchain in SDN for Distributed Applications

- Integrated blockchain with SDN to enhance security in distributed applications.
- Developed an ONOS controller cluster to eliminate single points of failure.
- Evaluated performance, security, and scalability to demonstrate blockchain's role in securing SDN.

Leadership & Activities

- Mentored students as a key member of **HackerSpace Club**, organizing hackathons and guiding innovative projects.
- Led a **capstone project**, managing timelines and fostering collaboration for successful implementation.

Technical Projects

Project Turtle

- Developed a shell script for streamlined installation of essential tools on Linux systems.
- Implemented error handling and rigorous compatibility testing across multiple distributions.

Yet Another Markdown Converter

- CLI tool to convert Markdown files to HTML with customizable theming and styling options.
- Designed for ease of use in terminal environments, enhancing workflow automation.

DoctorPres

- Developed a doctor prescription system using **Streamlit** and **MySQL**.
- Provided a secure, user-friendly interface for managing medical prescriptions.

EnigmaCipher

- Created a modern cryptographic system inspired by the Enigma machine.
- Combined historical cryptography with contemporary algorithms for secure messaging.

Professional Experience

Internships

Research Intern *CHIPS, Bengaluru* **May '22 – Jul '22**

- Conducted research on **Manycore RISC-V** architecture.
- Evaluated various RISC-V architectures to identify optimal design features.
- Benchmarked **OpenMP** and **MPI** implementations to derive performance insights.

Subject Matter Expert – Linux *PESU I/O (Paid), Bengaluru* **Jun '22 – Sep '23**

- Taught **Linux fundamentals** and command-line tools to students.
- Conducted sessions on **kernel modules** and **system programming**.
- Led discussions on **FOSS** principles and Linux system concepts.

Developer & Analytics Intern *Caliper Business Pvt. Ltd. (Paid), Bengaluru* **Feb '24 – May '24**

- Developed backend infrastructure for a **planner application** using **Django**.
- Designed an intuitive **frontend interface** with **ReactJS**.
- Integrated **AI models** for demand prediction, forecasting, and supply chain analytics.

Full Time Roles

Python Engineer *Caliper Business Pvt. Ltd. (Paid), Bengaluru* **May '24 – Nov '24**

- Developed and maintained **REST APIs** using **Django** and **Django REST Framework**.
- Built scalable **Pandas-based APIs** for data processing and analytics.
- Automated complex **Excel workflows** and data pipelines for business intelligence.
- Optimized backend performance for handling large datasets efficiently.
- Worked on scaling up existing projects to new clients.

Additional Information

- Passionate about **open-source software**, system design, and network security.
- Active contributor to tech communities and hackathons.
- Passionate and curious about tech and software.