

---

# Adarsh Liju Abraham

📞 8088229177 📍 Bengaluru, India

✉️ [adarsh.liju.abraham@gmail.com](mailto:adarsh.liju.abraham@gmail.com)  [LinkedIn](#)  [GitHub](#)



---

## Education

**Bachelor of Technology, Computer Science**

*PES University | 2020 – 2024*

**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 & Tools:** Django, ReactJS, Git, AWS

**Languages:** Malayalam, Hindi, English (Fluent)

## 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.

## Leadership & Activities

- Mentored 50+ students as a key member of **HackerSpace Club**, organizing hackathons and guiding innovative projects.
- Led a team of 5 in a **capstone project**, managing timelines and fostering collaboration for successful implementation.

## Technical Projects

### Project Turtle

 [GitHub](#)

- 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

 [GitHub](#)

- 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

 [GitHub](#)

- Developed a doctor prescription system using **Streamlit** and **MySQL**.
- Provided a secure, user-friendly interface for managing medical prescriptions.
- Implemented role-based access control and audit logging for enhanced security.

### EnigmaCipher

 [GitHub](#)

- 
- Created a modern cryptographic system inspired by the Enigma machine using Python.
  - Combined historical cryptography with contemporary algorithms for secure messaging.
  - Implemented comprehensive unit tests achieving 95% code coverage.

## Professional Experience

### Internships

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

- Conducted research on **Manycore RISC-V** architecture, focusing on parallel computing optimization.
- Evaluated various RISC-V architectures to identify optimal design features for high-performance computing.
- 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 200+ students with 90% course completion rate.
- Conducted hands-on sessions on **kernel modules** and **system programming**.
- Led discussions on **FOSS** principles and Linux system concepts, fostering a learning community.

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

- Developed backend infrastructure for a **planner application** using **Django**, reducing response time by 40%.
- Designed an intuitive **frontend interface** with **ReactJS**, improving user engagement by 25%.
- Integrated **AI models** for demand prediction, achieving 85% accuracy in forecasting and supply chain analytics.

### Full Time Roles

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

- Developed and maintained **REST APIs** using **Django** and **Django REST Framework**.
- Built scalable **Pandas-based APIs** processing 1M+ records daily for data analytics.
- Automated complex **Excel workflows**, reducing manual processing time by 70%.
- Optimized backend performance, reducing API response time by 60%.
- Scaled existing projects to support 5 new enterprise clients.

**System Engineer** *Twospoon, Bengaluru* **Nov '24 – Present**

- Developed highly scalable **Flask-based APIs** handling 100K+ daily requests for a **ReactJS** frontend.
- Architected and implemented **microservices** reducing deployment time by 40%.
- Designed and deployed **SNMP-based monitoring systems** achieving 99.9% uptime.
- Implemented comprehensive **automation solutions** reducing manual operations by 80%.

## Final Year Project

### Harnessing the Power of Blockchain in SDN for Distributed Applications

- Integrated blockchain with SDN to enhance security, reducing attack vectors by 60%.
- Developed an ONOS controller cluster achieving 95% availability.
- Evaluated performance metrics, identifying and mitigating 15 critical security vulnerabilities.

## Additional Information

- Active contributor to open-source projects with 500+ GitHub contributions in the last year.
- Won first place in 3 national-level hackathons for innovative solutions in system design.
- Published technical articles on Medium with 10K+ monthly readers.
- Holds AWS Solutions Architect Associate certification.