

ANAMIKA SANJAY

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PROFILE

Experienced Security Specialist with over three years of work experience in the identity and access management domain. Proficient in C programming, Inter Process Communication, Socket Programming, Linux, Shell Scripting, and Makefile. Successfully executed multiple projects in distributed systems, data compression and encryption, and network simulation. Graduated with master's in computer engineering and working as an eBPF **kernel developer** for an organization developing open-source security products, responsible for developing high-quality kernel modules for security and networking. Active participant in the open-source community.

EDUCATION EXPERIENCE

Master of Science, Computer engineering, Computer systems

August 2021 - May 2023

The University of Texas at Dallas

Bachelor Engineering, Electrical and electronics engineering

2013 - Aug 2017

Visvesvaraya Technological University (Reva University), India

First class with distinction

RELATED COURSEWORK

- Design and analysis of algorithms
- Data structure and algorithmic analysis
- Advanced digital Logic
- Advance operating systems
- Computer architecture
- Advanced computer network
- Microprocessors and embedded systems

PROFESSIONAL EXPERIENCE

IntelOps (Kernel(eBPF) developer)

Jan 2023 - May 2023

- Developed high-quality kernel module for open-source project for observability, security and networking.
- Used eBPF for packet processing, traffic reporting, packet filtering.
- Followed open-source development principles and best practices.
- Actively participated in the open-source community.

[Refer project here](#)

Research assistant (TinyML)

Aug 2022 - Dec 2022

- Conducting literature reviews and synthesizing research findings related to TinyML algorithms and architectures
- Assisting in the design and implementation of TinyML models using deep learning and other machine learning techniques.
- [Lead TinyML workshop](#) at DCAS (IEEE Dallas Circuits and Systems conference 2022).

Emblonic RCD Labs (Linux System Programming Intern)

May 2022 - Aug 2022

- Implemented system programming, processes, inter-process communication.
- Implemented sockets in AF_UNIX, and AF_INET Domains using TCP/UDP/IP protocols.
- Mastered Linux kernel and shell scripting for system administration, program source code control, project integration, memory, block IO, devices, filesystem, and booting.

IBM INDIA PVT LTD (Security Delivery Specialist)

Feb 2018 - July 2021

Build and Provision

- Maintained compliance on the systems and applications owned by the customers as per agreed security standards such as HIPAA, ISO/IEC 27001, and ISO/IEC 27002.
- Managed (creation/modification/deletion) user accounts/groups on Active Directory, UNIX, and AIX user-based applications.

Audits Management

- Assessed and documented root cause analysis for the external audits and developed mitigation plans. Educated the teams and customers about compliance policies and security standards.

PROJECT EXPERIENCE

Client Server communication using Inter Process Communication and threads

- Developed a client-server communication system using Inter-Process Communication (IPC) and threads. Used IPC techniques such as Pipes, FIFO, Shared Memory, and Message Queues along with threads to establish communication between server and client processes. Implemented thread semaphores for synchronization.
- Skills Used: C, Inter Process Communication, Linux, Shell Scripting, Makefile, Git

Client-Server communication using Sockets and Threads

- Designed and implemented an FTP client-server architecture using Sockets and Threads for multiple clients to retrieve or send files. Used AF_UNIX and AF_INET as communication domains. The server creates a new thread for each new client, which ensures that each client is catered to by a new thread.
- Skills used: C, IPC, Socket Programming, Linux, Shell Scripting, Makefile, Git

Implementation of Chandy and Lamport's Protocol for recording consistent global snapshot

- Implemented Chandy and Lamport's Protocol for recording consistent global snapshot in a distributed system of 'n' nodes. Used socket programming and multithreading to establish connections between peers. Implemented the Chandy and Lamport protocol for recording a consistent global snapshot, built a spanning tree, and augmented the protocol to collect information recorded at each node to node 0 using a converge-cast operation.

Implementation of Lamport's Protocol for distributed mutual exclusion

- Implemented Lamport's Protocol for distributed mutual exclusion in a distributed system of 10,000 nodes using socket programming and multithreading. Ensured mutual exclusion of services between all processes using Lamport's protocol.

Simulating a wireless network using Optimized Link State Routing Protocol (OLSR)

- Used file exchange for message communication between nodes and a controller process for copying messages from one node to another. Implemented the TC messages sent by Multipoint Relays (MPRs) to flood topology control messages throughout the network. Logged all messages in respective files for network activity visualization.
- Skills used: Network Simulation, OLSR Protocol, File Exchange, Linux, Shell Scripting.

ELIGIBILITY

- Eligible to work in the US for internships and full-time for up to 36 months.

