

Santosh Kumar Aenugu Seattle, WA | +1 541-745-9012 | a.santoshkumar1995@gmail.com
[LinkedIn](#) | [GitHub](#)

SUMMARY

Software Development Engineer with 6+ years of experience building scalable and high-performance systems at AWS and Qualcomm. Expertise in distributed systems, storage protocols, and cloud infrastructure. Proven success in delivering low-latency, high-throughput features for EC2 and Android platforms. Skilled in C++, Python, Linux, and system-level performance optimization. Passionate about delivering customer-impacting solutions at scale.

TECHNICAL SKILLS

Languages: C++, Python, C, Java, Bash

Frameworks & Tools: Git, React, Hadoop, MapReduce, HDFS, AWS EC2, NVMe

Platforms: Linux/Unix, Android, AWS

PROFESSIONAL EXPERIENCE

Amazon Web Services (AWS) – Seattle, WA

Software Development Engineer II

Aug 2021 – Present - Designed and integrated multi-core scalable EBS client APIs interfacing with NVMe libraries, improving parallel IO performance for next-gen EC2 platforms. - Led development of control-plane components for Nvme-direct, enabling hardware offload support. Achieved record-breaking EBS throughput: **620K IOPS, 120 Gbps**. - Delivered performance tuning and data layout optimizations resulting in **12% IOPS gain** on u7ib instances (560K vs. 500K). - Built a mock-IO simulator to evaluate architectural limits and influence design decisions for high-throughput customers (e.g., EPIC Health). - Developed automated test frameworks to validate protocol correctness and droplet configuration scenarios across performance tiers. - Reduced downtime in deployments and hardware failures by enhancing unit/integration testing for live migration and session persistence. - Deployed performance canaries to production to ensure SLA compliance and customer reliability. - Mentored 3 junior engineers and contributed to hiring through interviews and onboarding support.

Key Technologies: C++, Python, NVMe, Linux, EC2, EBS, Git

Qualcomm Innovation Center – San Diego, CA

Software Engineer – Display Systems

2019 – Aug 2021 - Developed display rendering logic to manage overlapping pixels on foldable Android screens across Snapdragon platforms. - Built support for Field Sequential Coloring (FSC) displays, increasing color accuracy and reducing flicker in hardware-integrated display drivers. - Validated display pipeline components in Android HAL and kernel modules, improving reliability in high-refresh-rate phones.

Key Technologies: C, C++, Android HAL, Linux Kernel, Git

PROJECTS

MapReduce Engine Implementation – Hadoop, Java, Python, HDFS

- Developed a single-node MapReduce engine with custom master and worker node execution.
- Implemented parallel mappers and reducers in Jython for efficient distributed processing of large datasets.

Personal Portfolio Website – React, HTML/CSS, GitHub Pages

- Created and deployed a personal static web page portfolio hosted on GitHub Pages to showcase projects and resume.

EDUCATION

M.E. in Computer Science – Oregon State University, Corvallis, OR

GPA: 3.54/4.00 | May 2019

B.E. in Computer Science – BITS Pilani, Hyderabad, India

GPA: 7.61/10.00 | June 2017

PUBLICATIONS

Urban Floods in Hyderabad under Present and Future Rainfall Scenarios

Published in *Natural Hazards (Springer)* | [IEEE Link](#)

INTERESTS

Competitive programming | Distributed Systems | High-performance Computing | System Design