SANCHIT SAHAY

New York University

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EXPERIENCE

Secure Systems Lab, NYU June 2024 – Present

Developer *Rust, Go, C, eBPF, Linux Kernel & FS*

- Built eBPF-based network attestations for in-toto(CNCF) and SBOMit(OpenSSF) to generate software build provenance.
- Created an in-memory file system within Intel SGX enclaves for TriSeal, enabling memory-safe syscalls and trusted I/O in a secure compilation framework.
- Designed syscall ABIs, and process coordinator for Lind-Wasm, a WebAssembly-based microvisor with sandboxed, deterministic syscall execution.

Commvault Systems January 2022 – August 2024

Engineer, Virtual Server Agent Team *Python, .NET, VMware, Huawei Cloud*

- Built backup and restore pipelines for private cloud, integrated with VMware and Huawei hypervisors for VM snapshot and data protection workflows.
- Automated end-to-end backup–restore tests using Python and Selenium; developed a Python vCloud API wrapper to create, delete, and validate VM operations.
- Developed Commvault's VMware Cloud Director plugin, enabling seamless integration with vCloud portals.

LegalAI April 2021 – December 2021

Full-Stack & DevOps Intern *Node.js, React, Google Cloud Platform*

- Built inference pipelines for an NLP system that automated legal claim drafting, along with React frontend portals.
- Deployed and managed microservices on GCP; developed a local emulator for CI/CD testing without cloud redeployments aimed at Google App Engine.

EDUCATION

New York University - Tandon School of Engineering 2024-2026

Master of Science - Computer Science GPA: 3.889/4.0

Cloud Computing and Big Data, Softare Supply Chain Security, Programming Languages, Algorithmic Machine Learning and Data Science

Manipal Institute of Technology 2018-2022

Bachelor of Technology - Information Technology Cumulative GPA: 9.10/10

Minor - Big Data Analysis

PROJECTS

HFS+ Port For FreeBSD - C https://github.com/stupendoussuperpowers/freebsd_hfs

Porting Apple's HFS+ Filesystem to FreeBSD 14. Scope includes modernizing VFS APIs, removing darwin dependency, and building userland binaries for disk management.

Cargo - Rust https://github.com/stupendoussuperpowers/cargo

Open source contributor to Rust's package manager - Cargo.

Improving Learned Bloom Filters https://github.com/stupendoussuperpowers/wise-bloom-filters

Research project exploring methods to improve traditional Learned Bloom Filters through various techniques such as Caching, Projection Hashing, and Low-Rank Approximation (LoRA).

Talk2Data - Python, AWS https://github.com/Sitanshuk/Talk2Doc

Utilized RAG and personalized LLMs to intelligently handle data from multiple sources (e.g., Notion, Gmail) in a centralized platform for college students' interactions with academic and professional information.

TECHNICAL SKILLS

Languages: Rust, Python, Node.js, C/C++, Java, C#, GoLang, Kotlin; **Frameworks:** eBPF, React, Next.js, .NET, Android SDK; **Databases:** MongoDB, Postgres, MSSQL; **Cloud:** Google Cloud Platform, Amazon Web Services, VMware vCenter, VMware Cloud Director; **ML/Big Data:** Pandas, Numpy, Keras, Spark, Hadoop, neo4j, Cypher