Ajay Nair

ajaynair59@gmail.com | anair2@andrew.cmu.edu | linkedin.com/in/ajaynair59 | https://github.com/ajaynair

(412) 626-8877

Education

Carnegie Mellon University (Graduating Dec 2020) Pittsburgh, Aug 2019 - Dec 2020

Master of Software Engineering | GPA: 3.62/4

Professional Experience (6 years)

Dell-EMC (Engineer II) India, Oct 2017 - June 2019

Project: Data Domain - A data deduplication storage system

- Implemented 5 NFSv4.1 operations
- Lead the design of REST access for NFS management operations
- Developed the REST access as a team of 6 (in 6 months for version 1)

Seagate Technology (Engineer II) India, Nov 2016 - Sept 2017

Project: Cloud Object ID generator (Individual project)

- Designed a distributed object ID generator library for 'Mero' cloud store in 4 months.

Project: Parallel Data Mover - A high-speed parallel data mover for High-Performance Computing use cases

- Implemented Lustre plugin module by developing archive, restore, and remove functionalities

Calsoft Inc (Software Development Engineer) India, Sept 2013 - Mar 2016

Project: Federated NAS - A distributed filesystem over multi-cloud sources. (Presented at SNIA-SDC conference)

- Developed architecture of the project along with the system-architect
- Implemented global virtual filesystem (GVFS), object filesystem (OFS) and OFS plugin for GVFS
- Developed in-memory cache that improved performance by 37%

Project: In-band extended attribute support for Network FileSystem (Mentoring)

- Researched ways to develop support for extended attributes in NFS
- Won 1st prize for the mentoring 4-member team for the implementation among 12 competitors

Academic projects

CAOsLab (4 member project) - Software to assist brain surgery CMU, January 2020 - December 2020

Lead architecture design, planning, and tracking. I took the role of customer's point of contact, product owner and construction leader in one semester each

Research Assistant CMU, January 2020 - May 2020

Wrote a spin model for formal verification of NFS Linux kernel which subsequently helped identify a bug

Open Source Contributions

- Assisted in fixing LIO SCSI Target error in Linux kernel: Link
- Fixed a security bug and resolved compilation warnings among other contributions to NFS-Ganesha: Link
- Added a security test to pyNFS: Link
- **FSAL-S3** - Started an open-source project for NFS-Ganesha to support cloud stores as backend

Skills

Programming Languages: C, Python, Java, MySQL, C++

Linux kernel, distributed systems, NFS, AWS, REST, Docker, Android, Git, JavaScript, RPC, MicroService

Recent Award

Firefly - Stood 1st in SITAC system architecture development award on behalf of CMU: Link

Volunteering

Lead a 5 member team at Bhumi (a not-for-profit), and taught Math and English to 30 5th and 6th grade students