

Aneesh Durg

CONTACT

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aneeshdurg.me

Github:

aneeshdurg

EDUCATION

*University of Illinois at
Urbana-Champaign*

Aug 2015-May 2019

Received BS in Computer
Science & Mathematics
with **High Distinction**

PROGRAMMING LANGUAGES

C, PYTHON, JAVASCRIPT,
BASH, RUST, HASKELL,
SED, D, GO, C++

LIBRARIES/ FRAMEWORKS

ML/AI: CAFFE, OPENCV,
TENSORFLOW

Web: DJANGO, TOR-
NADO, REACT, D3.JS,
JQUERY

Other: OPENMP, MKL,
CUBLAS, NUMPY, DAAL

WORK EXPERIENCE

Member of Technical Staff

Aug 2019-Present

Qumulo Inc. — Seattle, WA

- Implemented negotiation of SMB 3.1.1
- Implemented SMB server-side copy
- Implemented encryption capability to support SMB 3.x
 - Used the **OpenSSL** library to perform AES encryption
- Learnt about best practices surrounding encryption

Course Lead

Jan 2017-May 2019

Systems Programming (CS 241) — Urbana, IL

- Development lead for assignments, Lab/Office hours assistant, Honors mentor.
- Proposed and led initiative to redesign assignments to be more realistic such as:
 - Redesigned a filesystems assignment by creating a library that redirects filesystem calls, which students use to build a virtual filesystem.
 - Implemented a containers assignment where students build a docker-esque container framework using existing tools.
- Successfully mentored honors student teams to complete systems focused projects exploring areas such as distributed systems, compilers and writing kernel modules.

Software Engineering Intern

May 2018-Aug 2018

Qumulo Inc. — Seattle, WA

- Improved testing framework by using **linux namespaces** and sped up testing time by up to 5x.
- Designed developed a feature to enable IP failover in **AWS**.
- Learnt cloud networking best practices and extensively used the **AWS API**.

PROJECTS

What Is a Filesystem?

Javascript

http://aneeshdurg.me/what_is_a_filesystem

- An online interactive book with visualizations that help students learn about filesystem concepts.
- Features an implementation of a ext2-esque filesystem with animation to illustrate how a disk would be accessed.
- Features a terminal simulator which has many standard **GNU/Linux** utilities built in.

Pianux

C

<https://github.com/aneeshdurg/pianux>

- Implemented a piano that plays music written to a linux file-like object.
- Invented a domain specific language to describe music, supporting syntax for loops and multiple output channels that can be dynamically added and removed.

Algebraic C

C

<https://github.com/aneeshdurg/algebraic-c>

- Algebraic data types implemented in C.
- Leverages the **C preprocessor** to guarantee type safety.
- Built a custom preprocessor in **python** to aid code generation.

CameraTheremin

JavaScript

<https://aneeshdurg.me/CameraTheremin>

- Built an in-browser webcam theremin that can play musical notes controlled by hand gestures.
- Implemented all image processing functions required.