

ROHAN MATHUR

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EDUCATION

University of Illinois at Urbana-Champaign

August 2014 to December 2017

B.Eng., Computer Engineering

Emphasis on systems programming and backend web platforms with strong interests in OS Architecture & Design. Selected upper division coursework includes Advanced Operating Systems (Graduate-level), Advanced Computer Architecture (Graduate-level), Computer Systems Engineering (Systems Programming), Data Structures, and Algorithms.

EXPERIENCE

Microsoft

Redmond, WA

Software Engineer

June 2018 to present

- Working on the Windows Kernel team on lower-level subsystems Windows operating system.

NVIDIA

Santa Clara, CA

Software Engineering Intern

January 2018 to March 2018

- Profiled, analyzed, and fixed several I/O pipeline related kernel issues on the SHIELD line of Android products.
- Built kernel-level tooling for profiling input subsystem latency issues, and utilized this tooling to solve a bug.

Microsoft

Redmond, WA

Software Engineering Intern

May 2017 to August 2017

- Architected and led the development of an enhancement to Windows Search for an upcoming version of Windows.
- Integrated a new asynchronous event listener into the existing framework requiring deep architectural knowledge.

Airware

San Francisco, CA

Software Engineering Intern

May 2016 to January 2017

- Improved embedded application connectivity with the Cloud backend, enabling offline use of the platform.
- Implemented autogenerated flight plans and prototyped a ground control app.

Wyng (formerly Offerpop)

New York City, New York

Software Engineering Intern through the hackNY Fellowship

May 2015 to August 2015

- Created a new Flask-based web backend microservice that improved backend reliability and monitoring.
- Built REST APIs, custom HTTP authentication processes, and database functionality.

PROJECTS

AOKP (Custom Android Open Source OS)

<http://aokp.co>

Lead Developer

July 2011 to June 2015

Enhanced open source firmware distribution for smartphones and tablets based on the Android OS. Offers features and options not found in the official firmware distributed by vendors of these devices, including enhanced multimedia support, revised user interfaces/experiences, native theming support, and more.

- Led open-source project to boast over 11 million users around the world.
- Worked on vendor-distributed Linux kernel drivers and proprietary blobs to enhance device performance/features.
- Planned, executed, and code-reviewed several user-facing features that headlined on Engadget, The Verge, etc.

gyaradOS

<https://github.com/mathur/gyaradOS> (private)

A minimalist, modern monolithic operating system featuring virtualized memory (segmentation and paging), ext2fs filesystem support, keyboard/mouse/RTC/PIT/sound drivers, ELF-formatted user program execution, multiple shells, round-robin scheduling, dynamically allocated memory, and more.

Pipelined Processor

https://github.com/mathur/lc3b_pipelined_processor

A 5-stage pipelined processor supporting the full LC-3b ISA. Features split L1 caches, a unified L2 cache with cache arbiter, an eviction write buffer, MEM stage leapfrogging, instruction prefetching, and memory-mapped I/O support.

POSITIONS & ACTIVITIES

ECE 391 - Computer Systems Engineering – *Teaching Assistant*

Fall 2016 to Present

CS 196 - Intro to Computer Science (Honors) – *Course Assistant*

Fall 2015 to Fall 2016

IEEE UIUC Chapter – *Vice President*

August 2015 to May 2017

ACM@UIUC SIGMobile – *Chair*

January 2015 to May 2016