Rohan Mathur

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EXPERIENCE

Microsoft
Redmond, WA

Software Engineer — *June 2018 to present*

- On the Windows Core Kernel Team responsible for most core Windows kernel components such as the Scheduler, Registry, Synchronization Primitives, I/O Manager, Executive, etc.
- Component owner of the Windows Registry (also known as the Windows Configuration Manager) in the kernel, involving feature development and bug fixing for several internal and external consumers.
- Feature contributor to several other kernel components such as the Synchronization Primitives, I/O Manager, Executive, and others.
- Fixed numerous kernel bugs by working with several OEM and Software Partners, monitoring telemetry information, and recieving feedback.

Software Engineering Intern — *May 2017 to August 2017*

- Shipped an enhancement to the Windows Search Indexer for the RS3 (Fall 2017) release of Windows 10.

NVIDIA
Santa Clara, CA

Systems Software Engineering Intern — *January 2018 to March 2018*

- Profiled, analyzed, and fixed several I/O pipeline and Input related Linux kernel issues on Android products.
- Built kernel-level tooling for profiling input subsystem latency issues for various configurations.

Airware
San Francisco, CA

Software Engineering Intern — *May 2016 to January 2017*

- Enabled offline usage of the Airware Drone platform and implemented autogenerated flight plans in the cloud.

Rithmio
Champaign, IL

Software Engineering Intern — *August 2015 to January 2016*

- Developed an Android Application prototype featuring connectivity with a physical therapy wearable device.

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 monitoring and maintenance.

EDUCATION

University of Illinois at Urbana-Champaign
August 2014 to December 2017

B.Eng., Computer Engineering

Coursework emphasis in systems programming, OS architecture, and OS design. Selected upper division coursework included Data Structures, Algorithms, Operating Systems, Advanced Operating Systems (Graduate-level), Computer Architecture, and Advanced Computer Architecture (Graduate-level).

PROJECTS

AOKP (Custom Android Open Source OS)
http://aokp.co

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 mutlimedia support, improved user interfaces/experiences, native theming support, and more.

- Led open-source project to boast over 11 million users around the world.
- Planned, executed, and code-reviewed several user-facing features that headlined on Engadget, The Verge, etc.
- Worked on Linux kernel drivers and Android device build configurations to enhance device AOSP compatibility.

gyaradOS
https://github.com/mathur/gyaradOS

A minimalist, modern monolithic operating system featuring virtualized memory (segmentation and paging), ext2fs filesystem support, several drivers, user program execution, multiple shells, round-robin scheduling, and more.

Pipelined Processor in Verilog
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 December 2017*

CS 196 - Intro to Computer Science (Honors) – *Course Assistant* — *Fall 2015 to Fall 2016*

IEEE UIUC Chapter – *Technical Vice President* — *August 2015 to May 2017*

ACM@UIUC SIGMobile – *Chair* — *January 2015 to May 2016*

hackNY Fellow — *Class of 2015*