SHUBHAM AGARWAL

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EDUCATION

University of Illinois at Urbana Champaign
B.S. in Computer Engineering May 2016

WORK EXPERIENCE

Nodeprime, San Francisco Fall 2015

- Extending the platform that serves to examine datacenter infrastructure performance
- Integrating third party applications to extend Nodeprime's capability in recording metrics
- Working on open source Go implementation of mininet and openflow controller examples

Thomson Reuters, Chicago Summer 2015

- High performance, cross language development team building Transport Layer, Protocol encoder/decoder APIs using TCP/UDP, memory mapped I/O
- Open source modules to help customers integrate proprietary data with their own for monitoring markets

Grader for Operating Systems Course at UIUC Spring 2015

- Assisted professor in regular class work by grading student work submissions and invigilating exams

RELATED COURSEWORK

Data Structures	Distributed Systems	Communication Networks	Computer Security
Operating Systems	Algorithms	Database Systems	Systems Engineering

PROJECTS

Posterity – pocket wearable to detect and correct back posture Spring 2016

- Designing hardware, firmware for pocket sized wearable device with sensors to detect and correct posture
- Mobile application to store and graph useful information for personal use and medical research

Open Source Contribution Fall 2015

- Creating additional use cases for mininet in Go on GitHub under open-mininet
- Modules for Thomson Reuters to help developers interact with proprietary software Elektron-SDK

Contiki OS – open source OS for the internet of things Fall 2015

- Program enables sensors in data centers to send relevant information to database
- Power and memory efficient. Intercommunication in sensors to send data to out of range bases.

Altruist – crowdfunding to help people around you Spring 2015

- Web based crowd funding app, helps donors donate for a cause they support to people in neighborhood
- App interacts with database using SQL queries. Data to be collected from NGOs

Distributed Systems Projects Spring 2015

- Implementing peer to peer lookup service based on the paper "Chord" from SIGCOMM 2001 conference
- Communication between servers using consistency models and implanting inconsistency repairs

Building a File System, drivers, and a simple Operating System Fall 2014

- Built the functional core of an OS on a Linux Kernel, fedora with a read-only file system
- Wrote device drivers for mouse, keyboard, remote controller, terminal, real-time clock, and others
- Implemented features like paging, system calls, scheduling, interrupts, and stack switching in C, and x86

SKILLS

- C, x86, Go (Nodeprime), C++, Python, Node.js, Java