

# AKHILA NAIR

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## OBJECTIVE

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Looking for opportunities in the field of Systems Engineering, Cloud Computing, Computer Networking & Security.

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## EDUCATION

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### UNIVERSITY OF MASSACHUSETTS (GPA: 3.4/4)

LOWELL, MA

*Master of Science in Computer Engineering*

Aug 2017– May 2019

**Relevant Coursework:** Operating Systems, Network design, Software Defined Networks, Network Security, Cloud Computing, Internet & Web Systems, Software Engineering, and Microprocessor II.

### UNIVERSITY OF MUMBAI (7/10)

MUMBAI, INDIA

*Bachelor of Technology in Electronics Engineering*

Aug 2013 – May 2017

**Relevant Coursework:** Computer Communication Networks, Computer architecture design, Microprocessor, Microcontroller, Object Oriented Programming, Artificial Intelligence, Robotics, Circuit Theory.

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## CERTIFICATIONS

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**Embedded System and Internet of Things** – Eduvance

Jun 2016 - Present

**Internet of Things** – Cypress Semiconductor Corporation

Jun 2016 – Present

**Embedded System Design and Programming** – Eduvance

Jun 2016 – Present

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## TECHNICAL SKILLS

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**Tools and Technologies:** TCP/IP protocols, OSI model, Linux tools, DPDK, AWS, Microsoft Azure, Google Cloud Compute, JavaScript, CSS, Wireshark, SDN Hub, GitHub, Routing and Switching, Tridion

**Operating System:** Linux, Windows, Macintosh

**Languages:** C, Python, VHDL, Verilog

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## PROJECTS

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### Food Ordering Website

Sept 2018 – Dec 2018

- Used HTML, CSS, JavaScript to create a functional web page where the user can choose and order home-made food.
- Created Login/Logout database with the help of PHP MyAdmin to keep a log of customers and thereby enhance security.

### Multiprocessing in Linux Systems

Sept 2018 – Dec 2018

- Creating multithreaded version of producer and consumer model using Pthreads.
- Creating multiple child processes using fork() function call.
- Implementing different scheduling algorithm to maximize CPU utilization and minimize turnaround time.

### Website Hosting

Sept 2018 – Dec 2018

- Hands on experience with AWS services like Amazon EC2, Simple Storage services and Load balancing.
- Used Elastic IP, S3, Cloud watch, Simple Notification services to setup a WordPress website.

### Secure Instant Messenger integrated with RSA

Mar 2018 – May 2018

- Encrypted text on the client side and decrypted the same on the server using RSA algorithm.
- Used sockets as the mode of communication between the users.
- Implemented two modes of operation – Electronic Code Book and Cipher Block Chaining.

### SDN Hub and DPDK

Jan 2018 – May 2018

- Created a learning switch controller for POX.
- Used software queue to transfer data between threads using ring buffer.
- Developed Multicore Architecture using Receive Side Scaling.
- Implemented Count – Min Sketch to solve heavy hitter problem.

### Socket Programming – Client and Server

Sept 2017 – Dec 2017

- Implemented RDT 1.0, RDT 2.2, RDT 3.0 and Go Back and N protocol over an Unreliable UDP Channel

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## WORK EXPERIENCE

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### UNIVERSITY OF MASSACHUSETTS LOWELL – NURSING DEPARTMENT

LOWELL, USA

*Web Content Assistant*

Aug 2018 – Present

- Develop and implement content and social media strategy.
- Optimizing website content in Tridion application to bring greater material integration and site traffic.

### BOMBAY STOCK EXCHANGE

MUMBAI, INDIA

*Network Security intern*

Dec 2015 – Mar 2016

- Examined working of OSI layer and its implementation in communication process.
- Analyzed firewall administration, infrastructure support, quality analysis and network operations of the BSE network.
- Evaluated results, troubleshoots, tested security and system performances.
- Understood different types of leased lines, routers, CAT cables and their need for the system.