89 14Th Street, Troy, New York, 12180 | Contact: (518) 596-3500 | Email: [akshay8595@yahoo.com](mailto:akshay8595@yahoo.com)

# CAREER OBJECTIVE

To obtain a full-time position as a Software Engineer at IBM in 2019.

# EDUCATION

## Rensselaer Polytechnic Institute (RPI), Troy, NY

## *Master of Science in Information Technology, December 2018*

* GPA: 3.45/4.0
* Courses: Distributed Systems and Algorithms, Cryptography and Network Security 1, Data Science, Business Issues for Engineers & Scientists, Computer Operating Systems, Analysis of Algorithms, Network Programming, Database Systems, Software Development, Capstone

## Birla Institute of Technology, Ranchi, India

## *Bachelor of Engineering in Computer Science, June 2017*

* GPA: 7.84/10.0
* First Class with Distinction (GPA above 7.50)
* Courses: Programming in Unix & C, Data Structures, Object Oriented Programming using Java, Microprocessor and Microcontrollers, Computer Networks, Software Engineering, Artificial Intelligence, Compiler Design

# EXPERIENCE

**Teaching Assistant,** *Department of Computer Science,**RPI**August 2017 - present*

* Assisted in teaching Computer Science 1 (Fall' 18), Data Analytics (Spring' 18), Database Systems (Fall' 17), and Software Development (Fall' 17).
* Responsible for grading the assignments, quizzes, labs and individual projects.

## Research Assistant, *Tetherless World Constellation, RPI* *May 2018 - August 2018*

* Implemented models and predictions for marine biodiversity using R.
* Designed workflow to convert data into Darwin Core standards.

**Research Intern,** *Scientific Analysis Group,**Defense Research & Development Organization* *December 2016 – June 2017*

* Examined the differential cryptanalysis of PRESENT cipher and analyzed the transposition property of S boxes.
* Performed comparative analysis on lightweight stream ciphers like GRAIN, TRIVIUM, MICKEY and FRUIT.

## Research Intern, *Delhi University May 2016 - July 2016*

* Utilized machine learning techniques like Regression, Artificial Neural Network, and Extreme Learning Machine for financial forecasting and implemented the Online Sequential Extreme Learning Machine using the sigmoid function.

# Publications

* **Akshay Bhasin,** Girish Mishra, *Recent Advances in Lightweight Stream Ciphers*, CSI Transactions on ICT, DOI: 10.1007/s40012-016-0112-1, ISSN: 2277-9078, 2016
* Archana Thakran, Ram Pal Singh, **Akshay Bhasin**, *Analysis & Prediction of Nonstationary Time Series using OSELM*, Indian Journal of Science & Technology (IJST), 2016

# Projects

**Memory Management System** *March 2018 – May 2018*

* Implemented contiguous and noncontiguous memory management allocation scheme.

## CPU Scheduling Simulator *February 2018 - March 2018*

* Implemented FCFS, SRT, and RR algorithms for process scheduling in operating system.

**Distributed Twitter Service** *November 2017 – December 2017*

* Designed a distributed peer to peer network protocol for twitter service.
* Implemented the Paxos algorithm to replicate tweet, block, and unblock events.

**Design & Analysis of Lightweight Cipher for Internet of Things** *July 2016 – May 2017*

* Utilized lightweight cipher design primitives like SPN, Feistal Network, LFSR and NFSR to design a S box with differential distribution of 4/16.

**Linear & Differential cryptanalysis of a simple SPN network** *July 2016 – August 2016*

* Implemented linear & differential cryptanalysis attack on a primitive SPN network by Howard M. Heys.

**Skills**

* **Programming Languages:** C, C++, Java, Python, R
* **Web Technologies:** HTML5, CSS, XML
* **Database Technologies:** PostgreSQL
* **Build Technology:** Ant, Maven