

# Karan Tyagi

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## EDUCATION

**Northeastern University, Boston, MA**

Sept. 2017 - Dec. 2019

**Khoury College of Computer Sciences**

Master of Science in Computer Science, **GPA: 3.81**

**Institute of Engineering and Technology, Lucknow, India**

July 2010 - June 2014

Bachelor of Technology in Computer Science and Engineering, **GPA: 3.68**

## TECHNICAL SKILLS

<b>Programming Languages</b>	Java, C#
<b>Web Technologies</b>	HTML, CSS, Javascript, jQuery, React, Redux
<b>Frameworks</b>	AngularJS, ExpressJS, NodeJS, Spring Boot, .NET Framework
<b>Tools</b>	Git, Bitbucket, Jira, IntelliJ, Eclipse, Visual Studio, Bamboo, Postman
<b>Others</b>	Hadoop MapReduce, Amazon Web Services (AWS), RabbitMQ
<b>Databases</b>	MS SQL Server, MySQL, MongoDB (NoSQL)

## EXPERIENCE

**Application Developer Co-op** | Annaly Capital Management Inc., New York

Jan. - Aug. 2019

- Worked extensively on enhancing backend systems and implementing web services.
- Designed and implemented the Health Check Monitoring System to monitor critical jobs and SLA data breaches. Created the persistence layer, coded middle tier processes, and the web APIs using **C#** and **.NET framework**. Improved the efficiency of intercepting overnight-support issues and job failures by more than 50%
- Implemented Message Queuing library with publish-subscribe and broadcasting functionality using RabbitMQ and helped with the integration of message queuing with the existing financial systems.
- Automated the deployment of Database Change Requests by creating a service to query Jira API for change requests. Improved the deployment time for such requests by more than 80%.
- Build an Authentication web service using JWT to be used by other services running in containerized environments.
- Extended WPF application for running portfolio predictions by adding features to tweak various variables for a scenario; Created REST API backend, using **Entity framework**, **.NET core** and **ASP.NET Web API**

**Teaching Assistant** | Northeastern University, Boston

Jan. - Apr. 2018, Sept. - Dec 2018

- Conduct labs, office hours and grade assessments for Computer Graphics course
- Assist about 50 students with Graphics programming in C++ and OpenGL

## PROJECTS

**Job Search Made Easy** | Northeastern University

May - July 2018

- Designed a job portal and implemented it as a RESTful web app for aggregating jobs from APIs like Github Jobs API and jobs posted by registered recruiters, using **AngularJS**, **MongoDB**, **Express**, **NodeJS**

**Accessible Screen Navigation and Conversational assistant for the Blind** | PerkinsHack 2018

Feb. 2018

- Spearheaded the development of POC for a navigation system and integrated various modules to build a prototype
- Programmed the finger detection and beep generation modules using **Python** and **OpenCV**

**Search Engine** | Northeastern University

Jan. - Apr. 2018

- Implemented a Web crawler, Indexer, Query processor, Searcher using **Java**, **Apache Lucene** and **Maven**
- Evaluated performance of retrieval models like TF-IDF, BM25, and Query Likelihood model and Lucene

**American Sign Language Interpreter** | HackWITus 2017

Oct. 2017

- Constructed a dataset of 60,000 instances for training a logistic regression model using **AWS Machine Learning**
- Detected signs from American Sign Language using Leap Motion hardware and converted them to text using **Python**

## HACKATHONS

- OvenBot - Display Screen Navigation for the Blind | Won of **"Best Accessibility Design"**
- American Sign Language Interpreter | Won of **"Best use of Amazon Web Services"**

PerkinsHack 2018

HackWITus 2017