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

Programming Languages	Java, C#
Web Technologies	HTML, CSS, Javascript, jQuery, React, Redux
Frameworks	AngularJS, ExpressJS, NodeJS, Spring Boot, .NET Framework
Tools	Git, Bitbucket, Jira, IntelliJ, Eclipse, Visual Studio, Bamboo, Postman
Others	Hadoop MapReduce, Amazon Web Services (AWS), RabbitMQ
Databases	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**

Learning Management System | *Northeastern University*   *Apr. - May 2018*

- Implemented the faculty module as a RESTful web application | **ReactJS**, **Redux**, **Spring Boot**, **Java**, **JPA**, **MySQL**
- Implemented the student module as a RESTful web application using **MEAN** stack | **Angular**, **Node, MongoDB**

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

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

HACKATHONS

- OvenBot - Display Screen Navigation for the Blind | Won of "**Best Accessibility Design**"   *PerkinsHack 2018*
- American Sign Language Interpreter | Won of "**Best use of Amazon Web Services**"   *HackWITus 2017*