# **VAYBHAV SHAW**

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#### **EDUCATION**

## University of Minnesota, Twin Cities, MN

July 2019(Expected)

Master of Science in Computer Science

Courses: Machine Learning, Artificial Intelligence, Data Mining, Recommender Systems, Developing the Interactive Web, Social Network Analysis, Software Engineering, Dispersed Data Driven Computing

## West Bengal University of Technology, Heritage Institute of Technology, India

June 2013

Bachelor of Technology in Information Technology

### **SKILLS**

Languages : Java, Python, C#, C, C++, LISP, SQL, QJava

Web-Technologies : JavaScript, NodeJS, HTML5, CSS3, jQuery, JSX, Handlebars, Bulma, Bootstrap, JSON, AJAX, D3.JS, XML

Database : SQL Server, MongoDB, KDB

Framework/Tools : Play, ReactJS, Redux, Akka, React Native, ASP.Net, MS Visual Studio, Express, TensorFlow, TFS, GIT

#### **WORK EXPERIENCE**

#### Graduate Teaching Assistant, University of Minnesota, USA

Aug 2018 – Ongoing

- Teaching Assistant for the course CSCI 4131 Internet Programming
- Responsibilities include Developing and Grading, Assignments and Exam; Proctoring

### Software Developer Intern, Barclays, New York, USA

Jun 2018 - Aug 2018

- Designed, developed, and deployed; low latency, electronic-trading, Equities Risk-Aversion Software
- Achieved the above by implementing concurrent and distributed, Actor-Controller Model, using JAVA, Akka, and Play
   Framework, to automate the fetching of High-Frequency Trading Data from KDB Database using QJava
- Used this real-time data for computing associated trading risks using Statistical Equities Factor Models
- Displayed the volatile trading risk data on a dashboard using ReactJS and Redux

## Software Developer, Tata Consultancy Services, Kolkata, India

Sep 2013 – Jun 2017

- Developed complex application features for Visa Appointment, Passport Tracking, and Backend Application as per the requirements from 56 client governments in 129 countries with 2343 Visa Application Centers
- Responsible for full life-cycle application development with HTML5, ASP.Net, C#, Visual Studio, ADO.NET, and SQL Server
- Worked on Proof of Concept to check the feasibility of new software integrations and performed risk and impact analysis.
- Optimized Stored Procedures by fine-tuning SQL queries, thus reducing the latency of CRUD operations by 35%
- Implemented a highly secure Payment Gateway Module in the Online Visa Appointment System where the customer sensitive data was encrypted using AES-256 Bit Algorithm, the implementation having a visibility of over 1 million applicants.
- Conducted investigations to detect malicious attacks on the Visa Appointment System, having major business impact leading to
  a loss of over \$250,000. Developed software fixes to neutralize the attacks and restored normal operations.
- Successfully trained 4 incoming batches of Software Developers on project technology, architecture and domain knowledge
- Conducted meetings with clients from EMEA, ASPAC and AMR regions to comprehend the business requirements for implementation of new Object Oriented Software Modules and Change Requests.

### **ACADEMIC PROJECTS**

Neural Style Transfer

Aug 2017 – Dec 2017

Implemented a **Convoluted Neural Network (CNN)** using **Python** and **TensorFlow**, to perform semantic style/texture transfer on simple images to transform them into artistic paintings.

Note-e-Matic

Sep 2017 – Nov 2017

Developed a note-taking application using **React.JS**, **Node.JS**, **JSX**, and **jQuery** for writing and saving text and code notes (along with code auto-complete). It has features of inter-user notes sharing and tag-based note searching.

Movie Recommender System

Aug 2017 - Oct 2017

Developed an application using **JAVA** and **Lenskit** to provide personalized and non-personalized movie recommendation to users using collaborative filtering, product association, summary statistics, and demographic recommendation.

Brand Popularity Prediction and Visualization

Feb 2017 – Mar 2017

Implemented a project using **Python** to data-mine live streaming tweets from Twitter, and compared the twitter sentiments of Apple with Samsung at real-time to predict brand popularity.

## **AWARDS AND ACTIVITIES**

- Conferred the 'Service and Commitment Award' by Tata Consultancy Services, Sep 2016
- Received the 'Star of The Learners' Group' award amongst 207 inductees at the Initial Learning Program, TCS, Dec 2013.
- Secured 99.75 percentile (81447 test takers) at the 9<sup>th</sup> NIIT National IT Aptitude Test, Feb 2013