ADITYA MANDHARE

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EDUCATION

# North Carolina State University, Raleigh, NC

Master of Science, Computer Science (GPA: 3.55/4.0) Expected Graduation: May 2017

# University of Mumbai, Fr. Conceicao Rodrigues Institute of Technology

Bachelor of Engineering, Computer Engineering (GPA: 3.7/4.0) May 2014

TECHNICAL SKILLS

* **Programming Languages:** Java, C++, Python, Perl
* **Web Technologies and Frameworks:** PHP, JSP, HTML, JavaScript, XML, Servlet, Hibernate, Struts, Flask, Apache Hadoop
* **Databases:** MySQL, Oracle SQL, MS-SQL, PostgreSQL
* **Application Software & Tools:** Jenkins, Chef, Docker, Ansible, Vagrant, ZAP, Fortify, GIT, PVCS, Eclipse
* **Operating Systems:** Windows, Linux, Mac OS X

**COURSEWORK**

* Design and Analysis of Algorithms, Database Management System, Software Engineering, DevOps, Data Driven Decision Making, Automated Learning and Data Analysis, Artificial Intelligence, Software Security, Human Computer Interaction, UX.

**WORK EXPERIENCE**

**Software Developer at North Carolina Virtual Public Schools** May 2016 – December 2016

* Contributed to the development of ongoing project on Student Registration system for public schools. Created a new Registration system for non-public schools. Developed HTML forms and SQL stored procedures for data processing. Built an automated course creation software using Python. Developed PHP scripts to facilitate sync of new student records with the database. Worked on development of an Intranet site for facilitating document sharing in the organization.

**Software Developer at Tata Consultancy Services Ltd.** Oct 2014 – June 2015

* **State Bank of India Core Banking Project**

Worked in TCS core banking project of SBI as a software developer. Developed front-end banking screens. Constructed database queries and stored procedures. Worked on the development of the ‘promoter’ tool in Perl programming language used to promote code on the Dev/QA/Prod servers. Was rewarded with 5-star rating for excellent contribution in project.

* **Full Stack Software Development for Insurance Underwriting System**

Built a software system using Struts 2, Hibernate and Oracle SQL for an Insurance company for risk based assessment, which facilitates determining whom to insure, insurance premium’s charges and preparation of quotation for policy request.

* **Automation Software Development for Direct to Home (DTH) Television Services**

Developed a system using Servlet, JDBC and Oracle SQL enabling a DTH service provider to automate its business activities including, registering customers, creating products, assigning packages, billing and renewal activities.

ACADEMIC PROJECTS

* Data Driven Rate Setter System for Health Insurance Premium

Developed a system using Flask framework to set competitive premium rates for customers to maximize company’s profits. Analyzed customer’s Facebook posts and Tweets using Watson API to identify risk factors in his lifestyle and converting them to a surplus charge to be added to his base premium rate.

* Chrome Extension Improving Readability of an Infographic Web Page

Created an extension for Chrome browser using JavaScript helping users view an image on the web page at every instance of its reference in the web page saving the time spent in scrolling and help maintain continuity in reading. Identified the keywords related to each image using text processing and maintained a mapping to enable the display on reference functionality.

* Image Processing HCI project: T-Shirt Size Determination System

Built a system in Java to address HCI issue in an e-commerce environment, incorporating image processing and object recognition to provide personalized T-shirt size recommendations, improving apparel filtering process on an ecommerce website developed using HTML, CSS following best practices in Human Computer Interaction.

* Document Clustering Using Parallel K-means

Created a system in Java to cluster documents based on the frequency of occurrence of similar words by implementing K-means algorithm. Improved its efficiency using Apache Hadoop framework, by carrying out the clustering activity in parallel.

* Database System for Library Management

Implemented a Database System in Oracle SQL and developed Stored Procedures, Functions and Triggers for implementing system’s functionalities and constraints. Also created a user interface which interacts with database using Servlets and JDBC.

* Recommendation Tool Using Collaborative Filtering

Developed a recommendation tool in PHP which can provide personalized recommendations to the users of a website. Implemented an algorithm combining person-based and item-based filtering techniques to provide optimal recommendations.

* **Systems project on Simple DB**

Improved the efficiency of ‘SimpleDB’, an open source Java software, with an intelligent page replacement policy of 'Most Recently Modified' and replaced the ‘Array’ data structure with an efficient 'Map' data structure to keep track of the buffer pool.

* Software Security project on OpenMRS

Identified and fixed Security flaws in open source project, OpenMRS. Used ZAP and Fortify tools and threat modeling techniques to uncover security vulnerabilities, threats and design flaws in OpenMRS. Fixed them using security best practices.