**SARANYA BALAJI**   
Malden MA 02148

Phone no.: +1 (781)-535-8045

* [saranyabalaji92@gmail.com](mailto:saranyabalaji92@gmail.com)
* https://www.linkedin.com/in/saranya-balaji-958aa1105

**EDUCATION**

MS, Computer Science University of New Haven *Dec 2017*

BE, Electrical and Electronics Engineering Anna University *Apr 2014*

**WORK EXPERIENCE**

***RESURFX INC., Boston, MA***

***Role: Software developer Apr 2018 –Present: Big Data Analytics and Database development Intern May 2017 – Dec2017***

* Creating and testing new parts of a queryable SQL based relational database for eventual integration into the company’s analytics platform. In parallel, took a big data compute approach to achieve the same.
* Developed Hadoop Map Reduce programs in python to implement the above-mentioned big data compute approach in Amazon Web Services – Elastic Map Reduce (AWS- EMR) framework.
* Involved in developing a database and queries tier in company’s patented and proprietary product that includes extract-transform-load (ETL) capabilities for populating and querying data.
* Extracting and transforming data from various repositories, establishing appropriate schema loading the data, and making the data available through appropriate query primitives using python.
* Generating huge amount of data from the product/modules, external APIs to populate the data to the DB using python scripts.
* Developed use cases, perform comparative analytics and collaborate on white paper generation, product development and QC/testing.
* Developed scripting programs in Python to automate the process of generating the input data for the analytical platform.
* Analyzed large volumes of structured/unstructured gene related data using python scripts based on the formula given.
* Developed python scripts for automating the tasks which can be used for data assembling.

***RESURFX INC., Boston, MA***

***Role: Software Developer Intern May 2016 – Aug 2016***

* Developed data analytical/statistical modules using C++.
* Processed medium/large scales of biological (e.g., gene expression)/ informatics data using C++.
* Programmed for cross platform communications.
* Refactored existing C++ modules into reusable header files.

***TATA CONSULTANCY SERVICES, India***

***Role: Assistant Systems Engineer / Software developer June 2014 – Aug 2015***

* Served as an Oracle E-commerce Retail Merchandizing System (RMS) developer.
* Developed PL/SQL modules (procedures, functions, packages, triggers) for the transfer, shipment creation, purchase order creation, purchase order modifications in RMS.
* Created Pro\*C /shell scripts for one-time data migration from and to RMS.
* Gained hands-on experience in Oracle forms, reports, PL/SQL (packages, functions, stored procedures, triggers) UNIX shell scripts and Pro\*C scripts.

**TECHINCAL SKILLS**

* **Programming**: Python, C++, C, iOS development (Swift), SQL, PLSQL modules (PL/SQL, Stored Procedures, Functions, Packages, Triggers, PRO\*C- embedded SQL in C)
* **Big Data**: Hadoop Map-Reduce in python, AWS Elastic Map Reduce; **Databases**: MYSQL, Oracle.
* **Scripting**: Python, UNIX shell scripts; **OS**: Windows, Linux, Mac OS; **Version Control**: Git, JIRA and SVN.
* **Technical Certification**: Oracle Certified Professional - May 2013

**ACADEMIC PROJECTS**

**I**. Analysis of Safety Measures and Crime Prevention in LA City **|** Python, Hive, pyspark, Big Query

* Crime Data Analysis using a public dataset which is updated daily by Los Angeles Police Department. Defined various problems and solved those using Big Data solutions in Hadoop File System.
* Derived on a predictive analysis and compared the results between all Big Data solution techniques.

**II.** IOS Application Development **|** Swift

* A number and word guessing game (BULLS AND COWS) as part of the course work and for my master’s project which includes 10+ features.

**III.** Image processing application**|** Python, Image Processing libraries/algorithms

* Developed an application that manipulates/process a given image using various image processing algorithms.

**IV**. Course management Portal **|** SQL, PLSQL stored procedures, functions, Embedded SQL in C

* Created an application for managing the courses offered by the university as a part of database design course using Embedded SQL in C (Proc).

**V.** Web Page token analyzer **|** Python, Machine Learning Algorithms, K-means algorithm

* Created an application that analysis any given webpage and returning the most relevant keywords using various machine learning keyword extraction algorithms.
* This helps to summarize and tag a webpage, gives push recommendations to the user.

**ACADEMIC COURSES:** Database Management Systems, Advanced Databases, Distributed Databases, Analysis of Algorithms, IOS development, Data Structures, Object Oriented Analysis & Design, Script Programming using Python, Differential Calculus, User Interface Design, Software Quality Assurance, Computer Networks.

* Worked as a Teaching Assistant under Prof. Barun Chandra for Advanced Database systems coursework.
* Worked as a Teaching Assistant under Prof. Alice Fischer for Data Structures coursework.