Debraj Dey

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EDUCATION

- **Purdue School of Science** **MS in Computer and Information Science** **Grad: May 2019 (GPA- 3.50)**
- **Calcutta Institute of Technology** **BTech in Computer Science and Engineering** **Grad: August 2016 (GPA- 3.65)**

COMPUTER SKILLS

Programming Languages: Java, C, C++, JavaScript, HTML, CSS, MYSQL, Prolog, LISP, Hive, Spark
Tools: GitHub, IntelliJ, Wireshark, Carshark, SolarWinds SAM SOAPUI, QuickSight, Ambari, Sandbox, Tableau
Technologies: React, Angular, Bootstrap, AWS, APIs, Webservices, REST, XML, JSON, Docker, PIG, Apigee, Cassandra
Core Courses: Algorithms, Data Structure, Database Management, Cloud Computing, Software Quality Assurance, Big Data, Programming Languages, Computer Security, Design Patterns, Artificial Intelligence

WORK EXPERIENCE

Web Developer, University Information Technology Services (UITS) **November 2017 - Ongoing**

- Responsibility includes website development on different platforms using HTML5, CSS, JavaScript, Bootstrap, Angular.
- Using WordPress, Drupal, including website connectivity with Kaltura. Diagnosed errors and implemented solutions.
- Working with different data formats like XML and JSON also managing university information and database.
- Troubleshooting Media Plugins. Working alongside experienced software developer and testers.

Software Engineer, Wipro Limited **August 2016 – July 2017**

- Responsibility included Software Developing and Testing. Working mainly in Agile Environment.
- Worked on Selenium, QTP (UFT), ATDD, ALM, SOAP UI tools for automation using Java.
- Experienced in developing tools like Visual Studio, IntelliJ IDEA. Website Development and Database Connectivity using Firebird.
- Constant testing on email servers using MX Toolbox and troubleshooting the issue if not escalate.

Technical Assistant, University Library at Calcutta Institute of Technology (CIT) **January 2013 – December 2015**

- Responsibility included Database Administrator 40% Technical Analyst 60% including constant development of university website.
- Library Management- Registering new books in college database, keep a track on books which are given away.
- Troubleshot hardware devices as well as helping students if required.

WORK PROJECTS

➢ ***Migration project (Indiana University)*** **November 2017 - Ongoing**

- Developing new websites using HTML5, CSS, JavaScript, Bootstrap, with constant testing and covering all possible test cases.
- Expertise in Angular framework directives, services, controllers, filters, templates, events and injectors.
- Migrating university blogs and media to Kaltura Media Space. Adding RSS feeds to playlists and test them on different platforms.
- Installing and activating WordPress, Drupal Plugins on the blogs and website connectivity.
- Database connectivity process between Kaltura and University server. Monitoring server usage SolarWinds SAM.

➢ ***Searching Toolbox (British Telecom)*** **August 2016 - March 2017**

- Advanced Keyword Driven Searching Technique and worked on a new searching algorithm technique using Choco and Struts2.
- Identified, analysed and Documented gaps in existing test coverage for the new advanced algorithm.
- Connected website searches to Google Database for better user experience. Analysed all possible test cases.
- Introduced new toolbar for product search, offer search, redeem codes and did error monitoring for fake codes.
- Advanced Login process, enabling more secured customer information and payment information.

➢ ***BT TV New User Guide (British Telecom)*** **March 2017 - July 2017**

- Introduced BT Sports 3 and UEFA Champions League broadcast page and uploaded media.
- Developed, maintained and customized the existing live streaming media plugins.
- Created news pages for the user guide, troubleshot different extensions and converted them to a default one.
- Worked on a new TV help tool for BT TV customers and self-troubleshooting tool for users to get a quick fix.

ACADEMIC PROJECTS

➢ ***CatRatDog- Game*** **Spring 2019**

- Developed the front-end using CSS / HTML5 / XHTML / Bootstrap / JavaScript framework to build this one player game.
- Used Different functional logic to make this game much more interactive and fun to play to achieve a satisfying user experience.
- Covered and reviewed all the test cases carefully to achieve an accurate result. The overall result is satisfying.

➢ ***A Competitive Study between Different Software Design Patterns Using Java*** **Spring 2019**

- An ongoing project for Spring 2019 at Purdue School of Science.
- Considered seven different design patterns and implementing them independently using Java.
- Comparing each one of them by taking different parameters like usability, efficiency and code management.

➢ ***Electronic Voting System Using Blockchain*** *(Hyperledger)* **Fall 2018**

- Used Hyperledger Composer and Hyperledger Fabric to create a permission blockchain application for electronic voting.
- Explored different possibilities for system design, provided an implementation to satisfy the requirements of an EVS.
- Analyzed the performance of our system and reviewed the satisfaction of electronic voting system requirements.

- ***Abuse Detection System*** **Fall 2018**
  - Analyzed Twitter dataset using Hadoop frameworks: Apache Pig and Hive to identify whether a tweet is abusive or not abusive.
  - Provided a comparative study between these two frameworks and did Data Visualization using Tableau.
- ***Yelp Reviews Recommendation System*** **Spring 2018**
  - Analyzed the reviews from the dataset and implemented Sentimental Analysis.
  - Implemented Apriori Algorithm and Multinomial Naïve Bayes Algorithm to NLP problems.
  - Analyzed reviews and ratings to predict the accuracy (92%). Used Seaborn and Tableau for statistical data visualization.
- ***Crime Rate Analysis Using AWS Machine Learning*** **Spring 2018**
  - Collected dataset from Kaggle. Data cleaning, scrubbing for duplicates and data standardizing for optimized results.
  - Uploaded the dataset into Amazon Web Services, then analyzed the data using AWS S3(Simple Storage Service).
  - Predicted the crime rates and type of crimes in Chicago using the AWS Machine Learning Technique.
  - Created different graphs for analysis and used Tableau for data visualization.
- ***Game of Thrones Visualization Using D3*** **Libraries** (JavaScript, HTML5, CSS) **Spring 2018**
  - Implemented Force-Directed Graph, Interactive Web, Interactive Bubble Chart using D3 libraries.
  - Used HTML5 and CSS to build the main page and include all three-visualization techniques.
  - Analyzed the family tree and dynasty of the characters in the series. Also, measured the weighted average.
- ***Instagram Picture Locator Using REST API*** **Fall 2017**
  - Fetched data from Google Map API for manipulation of the JSON file.
  - Used API console Apigee to make requests to the Instagram API. Results are satisfiable and accurate.
- ***Chatbot- A Project on Artificial Intelligence*** *(Visual Studio, LUIS)* **Fall 2017**
  - Build an intelligent chatbot which gives us the academic details including grades and subjects.
  - Implemented Language Understanding Intelligent Service (LUIS) for Natural Language Processing (NLP).
  - Used Microsoft Bot Framework to connect our bot with different messaging services like Skype, Facebook Messenger, Twitter.
- ***Deep Analyzing between different programming languages.*** (Java, C, Python) **Fall 2017**
  - Implemented features like Garbage collection, Pointers, Multi-level Inheritance using Recursion in Java, C and Python.
  - Measured and analyzed parameters like Run Time Complexity, Speed, CPU cycle using different graphs.
  - Speed comparison between all three languages especially with smaller input sizes. Probable factors behind performance are analyzed.
- ***Home Automation System Using Microsoft Bot Framework*** **Fall 2017**
  - Worked on the implementation of cognitive architecture using tools like SOAR.
  - Implemented Bot Framework using Microsoft Bot Framework, and an introduction of light on and off feature
- ***IMDB Movie Rating Analysis Using Hadoop, Big Data*** (Pig, Spark) **Spring 2016**
  - Data Cleaning, scrubbing for duplicates. Performed data standardization in the beginning to optimize the accuracy and result.
  - Analyzed data using Hortonworks Sandbox. Used Pig and Spark to create scripts to process data on the Hadoop cluster.
  - Analyzed non-relational data using HBase, Cassandra, and MongoDB. Answered different queries related to the dataset.
- ***Cloud Computing Architecture*** (IBM Bluemix) **Spring 2015**
  - Used IBM Bluemix to build and manage private clouds.
  - Also, used OpenNebula to manage clouds with VMware ESX and Hybrid Cloud with Amazon EC2

RESEARCH PUBLICATION

- ***A Survey on Routing in Vehicular Ad-Hoc Network (Purdue School of Science)*** **December 2018**
  - Understand the concept behind Vehicular Adhoc network (VANET).
  - A brief comparison between Dedicated Short-Range Communication (DSRC) and other routing protocols.
  - Analyze different vehicular routing process and different safety applications.
- ***A Survey on Security in Vehicular Ad-Hoc Network (Purdue School of Science)*** **December 2018**
  - Vehicle-to-vehicle (V2V) communication explained. Challenges regarding automotive safety and security.
  - Discussion on legacy routing protocols like CAN, LIN, FlexRay and the security concern over them.
  - A detailed discussion on protocols for VANET like MAC, DTMAC, TDMAC and probable solution for security in the future.
- ***Study of Deep Web and a new Form-based Crawling Technique (IJCET)*** **Vol 7-page 36-44** **February 2016**
  - A hidden web crawling technique with a keyword-based form interface and a multi-attribute searching technique.
  - Concerned with people database. With formidable results and accuracy after analyzing.

CERTIFICATIONS

- HTML5, CSS, WordPress
- Java Programming Language using Java SE8
- Big Data Analytics, Tableau
- Cloud Computing from IBM Bluemix
- Oracle DB2, SQL, PL/SQL