

Debraj Dey

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[Portfolio](#) [LinkedIn](#) [GitHub](#)

EDUCATION

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|------------------------------------|---|-------------------------------|
| • 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

- **Games – CatRatDog, Blackjack** **Spring 2019**
- Developed the front-end using CSS / HTML5 / XHTML / Bootstrap / JavaScript framework to build this single player game.
 - Typed.js library is used for better UI Design. Covered and reviewed all the test cases carefully to achieve an accurate result.
 - Used Different functional logic to make the games much more interactive and fun to play to achieve a satisfying user experience.
- **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 (IJCTET) 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