www.asishkakumanu.github.io
github/AsishKakumanu

ASISH KAKUMANU

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EDUCATION

Buffalo, NY	SUNY Buffalo	Aug 2018 – Feb 2020

- M.S. in Computer Science & Engineering
- **Coursework:** Data Mining & Bio Informatics, Machine Learning, Information Retrieval, Distributed Systems, Data Intensive Computing, Robotics Algorithms, Parallel Algorithms.

SKILLS

- (*proficient*) Python, Java, Flask, JQuery, React, HTML, CSS, JS, MATLAB, Sass, SQL, GIT.
- (*familiar*) Apache Solr, Android, AWS, GCP, Docker, Spring, Hibernate, Django, ROS, Sketch, Figma, Principle.

WORK EXPERIENCE

Research Intern	SUNY Buffalo	Mar 2020 - Present

- Improved security in Android Applications by using hardware-based solutions like ARMs Trust Zone.
- Devised an API Interface based on open-source TrustZone Framework OP-TEE.
- Written Native code on a Secure environment that talks to a Non-secure Java environment using JNI.

Software Developer	Standard Chartered GBS	May 2016 – Jun 2018

- Developed production-ready UI which is fluid and supports legacy browsers.
- Automated production and collection of reports and eliminated time-consuming manual process.
- Devised a mailing system for notifying real-time build operations using **Java Mail**.
- Refactored code to optimize web application reducing storage overhead by nearly 30%.
- Increased website load speed by 40% by minifying JS and optimizing images.
- Developed a module which generates excel sheets using **Apache POI**.
- Engineered **LDAP** Authentication and OTP For **Two-Factor Authentication**.
- Implemented the business layer by using **Hibernate**, **Spring DAO**, and **JDBC** to retrieve data.
- **Stack** : Java, Angular, HTML, CSS, Apache POI, DataTables API, Shell Scripting, AJAX, Bootstrap.

PROJECTS

Replicated Key-Value Store

- Developed a Dynamo like Key-value storage with consistent hashing for node & key distribution.
- Object versioning for linearizable consistent data objects by associating a vector clock for each object.
- Replicated data to the nearest neighbors for failure tolerance.
- Utilized: Java, Android.

Group Messenger

- Implemented a decentralized group messenger using emulators in the Android Environment.
- Focuses to guarantee Total and FIFO Ordering while handling failures.
- Utilized: Java, Android.

Document Search Engine

- Deployed a search engine on **AWS EC2** instance for document search within PubMed Corpus.
- Added features like fuzzy search, boolean queries, psuedo relevance, faceted search.
- Utilized: Java, Apache Solr, AWS EC2.

Big Data Analytics

- Crawled large unstructured data from twitter, NYTimes & Common Crawl Archives and performed analytics using **Hadoop MapReduce** on **HDFS** and visualized using **Tableau**.
- Utilized: R, Python, BeautifulSoup, Apache Hadoop, Docker, R Shiny, Tableau.

Automatic OTP Detection

- Developed a module that auto populates the one time password for Android.
- Wrapped using **Apache Cordova** to target multiple platforms.
- Utilized: Java, Android, XML, JS.

GradCafe Telegram Bot

- Completely developed a telegram bot which scrapes searched data from GradCafe and sends as a message back to the user.
- Utilized: Python, Teleloop, Urllib, HTTP Requests.