TULJASREE BONAM

Contact: 571-536-4476 | E-mail: tulja.bonam@gmail.com / tbonam@gmu.edu
Address : 4297, Cotswolds Hill Ln, Fairfax, VA 22030 | LinkedIn | GitHub

EDUCATION

➢ **GEORGE MASON UNIVERSITY** **Fairfax, Virginia**
Masters in Computer Science- GPA: 3.88 (Jan 2020 – Exp. Dec 2021)
Coursework- Analysis of Algorithms, Component- Based Software Development, Data Mining, Software Engineering for the World Wide Web, Mathematical Foundations in Computer Science, Fundamentals of Systems Programming, Information Security, Mobile Immersive Computing.

➢ **OSMANIA UNIVERSITY** **Hyderabad, India**
Bachelor of Engineering in Computer Science- CGPA: 3.7. (Jun 2015 – May 2019)
Coursework- Data Structures & Algorithms, Software Engineering, Operating Systems, Computer Network & Security, Cryptography, Compiler Design, Web Programming & Services, Probability, Cloud Computing, Database Management Systems, Data Mining, Discrete Mathematics, Artificial Intelligence, Computer Architecture, Information Retrieval Systems.

TECHNICAL SKILLS

- **Programming/ Scripting/ Mark up Languages**: Java, Python, JavaScript, TypeScript, Bootstrap, CSS, C, C++, SQL, JSON, HTML, XML, PHP.
- **Database/ Cloud Services**: Oracle, MySQL, MongoDB, MS SQL Server, AWS, Google Cloud Platform.
- **ML Libraries/ Packages**: NumPy, Pandas, SciPy, Scikit-Learn, XGBoost, Matplotlib, Seaborn, NLTK, Ggplot, RandomForest, KNN.
- **Frameworks / Platforms:** Spring Boot, Kafka, Node.js, Express.js, Angular.js, React.js, Docker and Kubernetes.
- **IDE Tools:** IntelliJ, Visual Studio Code, Atom, Sublime. NotePad++, Remix, Clion, Pycharm.

EXPERIENCE

➢**VERIZON MEDIA**
Software Engineering Intern (June 2021- Present) - **Dulles, Virginia**
Working as a Software Engineering Intern, contributing to **JEDI,** an umbrella project for the rewrite of all mail web front-end and deal with the production and maintenance of mail architecture services (REST APIs) of **Yahoo! Mail** –YService, which is used for and acts as the core of automated testing framework. Technologies - **Spring Boot (Maven)**, **Jersey** framework.

➢ **GEORGE MASON UNIVERSITY**
Graduate Teaching Assistant **(**Aug 2020 - Present) - **Fairfax, Virginia**
Working as a **Graduate Teaching Assistant** and **Lab Instructor** for the course Introduction to Computing at Information Science and Technology department, instructing the students about the course work on HTML, JavaScript, Python, AccessDB and Cybersecurity. Assisted a faculty instructor with a large lecture class by teaching students in **laboratory, and discussion.**

PROJECTS

- **Calculation of Rotations on Binary Tree-** Designed an algorithm with three phases to reduce the number of performed rotations on Binary Trees consisting of 1000,1100 and 1200 nodes at each phase; Phase 1 transformed an arbitrary binary tree into a skewed binary tree and then to a Completely Balanced Binary Tree and calculated the number of rotations it took to be transformed into a Completely Balanced Binary Tree. Phase 2 is an optimized version of Phase 1 to reduce the number of rotations. Phase 2 is further optimized to Phase 3 to obtain lesser number of rotations to transform an arbitrary binary tree to a completely balanced binary tree. Technologies- **Java, Graph Algorithms**.

- **Dynamic Student Survey Form, Department Course Catalog-** Led a team of four to create a full stack project in multiple phases by upgrading technologies each time; Technologies- **JavaScript, JQuery UI, Angular.js, AJAX, HTML** and **CSS** for the front end**, Node.js/ Express** for the middleware and **Java- JPA, Spring Boot, JSP** for the server side. Further updated this project by adding messaging streams using **Kafka** and deployed it on Google Cloud Platform (GCP) by dockerizing and orchestration using Kubernetes. Also hosted this on AWS S3, EC2 and Elastic Beanstalk.

- **Blockchain Anomaly Detection-** Implemented a project where I detected anomalies in the Blockchain network (Bitcoin Transaction History) by finding patterns between the transactional outcomes and the flow of the given transaction and co-related their behaviors. Technologies- **K-Means**, **IsolationForest, CBLOF**, **HBOS** using **Python**.

- **Prevalent Words in a Website-** Created a project that reads the given URLs, parses the content and stores each word present in the URL and the number of times that word appeared in that URL, and finally provides an output of the top 10 most prevalent words and their counts. Made synchronous, asynchronous and parallel calls using multithreading for this. Technologies- **Java- Spring Boot Framework (Maven).**

- Created a Cloud Storage Security project which is a three-layer privacy preserving cloud storage scheme based on computational intelligence in fog computing. Technologies- **HTML, CSS, JavaScript, Java, MySQL.**