BHARGAV VASUDEVA VUNNAM

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Portfolio: https://bhargavvasudevavunnam.github.io/Portfolio/ | GitHub: https://github.com/BhargavVasudevaVunnam

EDUCATION:

Master of Science, Computer Science Jan 2021 - Dec 2022
Wichita State University, Kansas, USA. GPA: (3.81/4.0)

Bachelor of Engineering, Computer Science Engineering Jan 2015 - July 2019
SJB Institute of Technology, Bengaluru, India. CGPA: (7.0/10.0)

TECHNICAL SKILLS:

Languages: Java, Python, Shell Script, HTML, Oracle SQL, MySQL, PHP, JavaScript, C++, Linux.
Concepts: Data Structures, Web Scraping, Machine Learning, Image Analysis, Artificial Intelligence, Neural Networks.
Operating System: Windows, Linux, iOS.
Frameworks: Kera's, Git, CSS5, Kafka, Spring Gateway, Maven, Spring Rest API, Selenium, Spring Boot, Bootstrap, React JS.

PROFESSIONAL EXPERIENCE:

Assistant System Engineer, Tata Consultancy Services, Bangalore, India Jul 2019 – Jan 2021

- Developed microservices, Used Spring Cloud Gateway as a common standpoint with Eureka Service Register to provide Load Balancing, URL Resolution, Security Features. Development lead to increased sprint productivity.
- Added documentation features to existing application by adding thyme leaf dynamic rest templates and configuring Swagger UI of the rest controller. Reduced documentation load for peers.
- Developed stories based on selenium, Junit for automating web testing. The development helped the BaNCS testing team remove 70% of the manual load.
- Automated DDL and DML statements development, using Shell Script and Java. Automation streamlined the development of DDL and DML statements, boosting sprint target achieving time by 40%.

Software Intern, Datalore Labs, Bangalore, India Apr 2019 – May 2019

- Web Scraping was implemented on the IMDB website using pythons Beautiful Soup library. Used the data to assign movie scores. Scraped User Reviews increased the business growth of clients by 20%.
- Used HTML, CSS5, Bootstrap, JavaScript, React Hooks to present received API data, Resulted in increased UI/UX experience.

ACADEMIC PROJECTS:

Gender Classification using LBP May 2022 – Jul 2022

- Developed a machine learning model to classify gender based on the image. The project helped to integrate gender detection features into a website, increasing user visits from 600/day to 1000/day.
- The given image is denoised, data augmented and resized. Features are gotten utilizing Local Binary Pattern with a window of (8,1).
- The obtained features for 1,00,000 images were trained using SVM with a gaussian Kernel. The model outperformed a Convolutional Neural Network. It produced an accuracy of 96%.

3D Maxima Nov 2021 – Dec 2021

- Developed an approach to solve the 3-D maxima problem at a 20% faster rate. This solution was used by CAD students to identify the surface points of a given 3-D model.
- Given a set of 3-D points, maximal points were found. The maximal points are the surface points that do not have any other points greater than them.
- The points are sorted based on Z-axis. 2-D maxima for the X-Y axis are calculated. Calculating 2-D maxima reduces the problem of comparing each value of the sorted points with 2-D maxima for dominance.

Post Translational Modification site detection Mar 2021 – May 2021

- Predicted N-Linked Glycosylation sites for viruses that are novel using Machine Learning. Prediction outperformed a convolutional neural network trained with the same amount of data. Produced accuracy of 96% on novel test subjects.
- The data available for viruses are sparse, so used Transfer Learning to combine data. The data obtained is one hot encoded with a frame window of 10 and fed into a support vector machine with a Gaussian Kernel.

8 Queens Mar 2021 – May 2021

- Composed methods using artificial intelligence to solve the (8*8) chessboard problem. Development enhanced solving time by reducing computation performed. The developed solution ran about 1.5 times faster than a conventional approach.
- A conflict-free state is predicted using the Hill climbing approach for an (8*8) chess board with 8 queens at a random position. The hill climbing approach always picks the greedy state.
- This approach always leads to local maxima. This solution is good considering a few steps time ahead. An approach particularly suitable for chess problems where it is not possible to evaluate all the state space.