

BHARGAV VASUDEVA VUNNAM

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

EDUCATION:

Master of Science, Computer Science

Wichita State University, Kansas, USA.

Jan 2021 - Dec 2022

GPA: (3.81/4.0)

Bachelor of Engineering, Computer Science Engineering

SJB Institute of Technology, Bengaluru, India.

Jan 2015 - July 2019

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 python's BeautifulSoup 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.