

# Lakshmi Gayathri Rangaraju

Graduate student at Clemson University

☎ (+1) 864-776-1501 | ✉ lrangar@g.clemson.edu | 🌐 <https://github.com/LakshmiGayathri19> | in <https://www.linkedin.com/in/lakshmi-gayathri-rangaraju-053036184/>

## Education

### Masters in Computer Science - 3.78/4

Clemson University

August 2022 - May 2024

Clemson, USA

### Bachelor of Technology in Computer Science - 7.97/10

Keshav Memorial Institute of Technology

August 2017 - May 2021

Hyderabad, India

## Course Work

- Machine learning
- Deep learning with Computer vision
- Statistical Methods - I
- Security in advance network technologies
- Data mining
- An introduction to Artificial Intelligence

## Research Interests

- Machine learning
- Computer vision

## Work Experience

### Graduate Research Assistant

Clemson University

September 2022 - Present

Clemson, USA

- Collaborated with Dr. Da Li, Assistant Professor in Civil Engineering department to enhance the user interaction of their existing website.
- The technologies involved in this project are - Machine Learning, Dash, Python.

### Software Development Engineer

Amazon

August 2021 - July 2022

Hyderabad, India

- Improved privacy compliance of a service, by developing well designed and tested code for back end.
- Devised good quality test cases to check backward compatibility and the API workflow during an internal service framework migration.
- Raised the Operational Excellence bar of my team by identifying root causes for issues in our services and by taking future action items to reduce the recurrence of the same issue, and by reviewing peer's code.
- Improved developer productivity by implemented an automated notification system to ping service on-calls about paged messages. And strategically migrated off the legacy system.
- Contributed to Engineering Excellence by automating the process of copy pasting the configurations from one service environment to another, which improved developer productivity while creating new service environments.
- Technologies involved in these projects are – Java, Spring, Dagger, AWS, Junit, Mockito, Git.

### Software Development Intern

Amazon

January 2021 - August 2021

Hyderabad, India

- Reduced the manual effort of collecting basic information of issues from clients by automating the process through a new, efficient, and well-tested Model-View-Container (MVC) application.
- Technologies involved in this project are – React, Java, Spring, Git, Junit, Mockito.

### Research Intern

Genoparadigm

January 2020 - May 2020

Hyderabad, India

- Helped radiologists in determining if the patient has breast cancer by constructed a deep learning model which detects the presence of lesions in mammogram images.
- Technologies involved in this project are – Deep learning, Python, Numpy, Pandas.

## Publications

- [1] Subramanian Rajasekaran, **R. Lakshmi Gayathri**, Jain Priyal, Kanneganti, Sai Rohith. "Automatic Breast Cancer Lesion Detection and Classification in Mammograms Using Faster R-CNN Deep Learning Network", *issues and Developments in Medicine and Medical Research* Vol. 6, February 2022, Page 10-20. [\[Link\]](#)
- [2] Subramanian Rajasekaran, **R. Lakshmi Gayathri**, Jain Priyal, Kanneganti, Sai Rohith. "Breast Cancer Lesion Detection and Classification in Radiology Images using Deep Learning", *European Journal of Molecular and Clinical Medicine*, 2020, Volume 7, Issue 3, Pages 677-684. [\[Link\]](#)

## Technical Skills

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<b>Programming Languages</b>	C, Cpp, Java, Python, HTML, CSS, Bootstrap, React, Dash
<b>Database</b>	MySQL
<b>Version Control System</b>	Git
<b>Backend/Testing Frameworks</b>	Spring, Dagger, JUnit, Mockito
<b>Artificial Intelligence Frameworks/Libraries</b>	Scikit-learn, Numpy, Pandas, Pytorch
<b>Cloud technologies</b>	Amazon Web Services - SQS, Lambda, SNS, EC2, CloudFormation

## Projects

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### Timely

Developed a website using PHP and SQL database, which aims at decreasing the manual work of delivery centers by segregating the deliveries according to routes and availability slots of customers efficiently via the website. March, 2018

### Face Mask Detection

Worked on a deep learning model (YOLO) which detects face masks using tensorflow framework. This tool can be used to surveillance people in public places for ensuring safety during pandemin situations. July 2020

### Driver Drowsiness Monitoring System

Built a deep learning model (CNN + LSTM) which takes in the person video while the person is driving, and alarms when the driver feels drowsy. This alerting tool aids in reducing the accidents caused due to drowsiness of the drivers. May 2021

### Quality Evaluation of Skull Stripped Brain MRI Images

Built a useful tool using deep learning technology(CNN) which reduces human intervention for evaluating the quality of skull stripped brain MRI images. May 2021

## Certifications

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Online	Deep learning specialization by Coursera	<i>May, 2020</i>
Hyderabad	Certified in Business English (BEC) at Vantage level by Cambridge with Grade C.	<i>September, 2018</i>
Hyderabad	NPTEL Online Certification in Google Cloud Computing Foundations with 75%.	<i>November, 2020</i>
Hyderabad	NPTEL Online Certification in Block chain Architecture Design and Use Cases with 45%.	<i>April, 2019</i>