

# SHASHANK VADLAMANI

**Phone:** +18012896242 | **Email:** vshashank32@gmail.com | **Addr:** Salt Lake City, UT 84102 |

Linkedin: <https://www.linkedin.com/in/shashank-vadlamani-760a7b121/>

Github: <https://github.com/ShashanKV98>

## EDUCATION

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### University of Utah, Utah

*Aug 2019 – May 2021*

Masters of Science in Computer Science

#### Courses (First Semester):

Advanced Algorithms, Computer Architecture

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### Vellore Institute of Technology, India

*July 2015 – April 2019*

Bachelor of Technology in Computer Science and Engineering

**GPA:** 8.89 / 10.0

#### Courses:

Social Information Networks, Machine Learning, Image Processing, Artificial Intelligence, Parallel and Distributed Computing, Software Engineering, Applied Linear Algebra

## SKILLS

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**Programming Languages:** Python, Java, C/C++, R, Unix Shell Script

**Web Development:** HTML/CSS, PHP, JavaScript

**Databases:** Oracle, MySQL, SQL Server

**Tools:** Visual Studio IDE, Git, Android Studio IDE, Jupyter, Neo4j, Arduino

**Operating Systems:** Linux, Windows 10.

## EXPERIENCE

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### Summer Intern

Electronics Corporation of India Limited (ECIL), Hyderabad, India

*May 2018 - June 2018*

Project on Android App Development

- Designed an Android App on Mind Tech bug component system in software organization.
- An application designed to automate the tracking of various reported bugs in an organization and find solutions to provide a better environment for the user.

## PROJECTS

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### IoT Garbage Monitoring System

*Internet of Things, Spring 2016*

- Designed a system that monitors the level of garbage at different locations around the campus.
- Used Arduino, sensors like ultra-sonic, LDR and GSM module along with integration with cloud (ThingSpeak) and Google Maps to analyze, locate and also get the shortest path to the desired location.

### Med Assist

*Machine Learning, Spring 2017*

- Designed a disease diagnosis system that does a symptom analysis based on the inputs of the user and generates a diagnosis report of the possible disease and the corresponding medication.
- The classification of data into discrete disease types is achieved through Random Forest algorithm by changing the values of different hyper parameters to get accurate results.
- Used R, Python for the Back-end and Shiny, an R package to render HTML display scripts with analytics of R.

### Comparative study of Image Parallelization in CPU vs GPU's

*High Performance Computing, Fall 2018*

- Used Siamese network for one shot face classification using both CPU and GPU architecture.
- CPU parallelization is done using Numpy and CUDA architecture is used for utilizing GPU cores.
- Face detection using GPU was found to be 6 times faster than without it.

**Image Retrieval using Micro Structure Descriptors***Content Based Image and Video retrieval, Spring 2017*

- Implemented a novel image retrieval algorithm which mimics human visual recognition using edge orientation detection and underlying colors as a base for feature extraction.
- Used libraries like OpenCV, Numpy along with Pymongo API and MongoDB database.

**Regular expressions to DFA***Theory of Computation and Compiler Design, Fall 2016*

- Developed a program that converts a regular expression to DFA (with the help of Thompson's construction) via epsilon NFA). Later reduced to minimized DFA.
- Computes the postfix form from the expression and then into a syntax tree which then assigns positions to leaf nodes. Also outputs the start, final and delta states of NFA and DFA.

**Top IMDB Movie Analysis***Social and Information Networks, Fall 2017*

- Analysis and depiction of relationship between the actors and the movies that include the centrality measures like degree, closeness and betweenness.
- Scraped the data from IMDB webpages using Node.js script, and visualized using the Neo4j graphics tool
- Further analysis is also done about the success rate of the actor based on movies and ratings.

**Face recognition access control using Deep Learning and Apache Spark***Final year project, Spring 2018*

- Used deep learning libraries and classification algorithms on a celebrity dataset for one shot recognition.
- Spark with Python API is incorporated through cloudera distribution platform using HDFS in virtual Linux OS.
- A web application (WSGI) using Flask framework is designed for a user-friendly interface to access images