# Shubham Mor

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### EDUCATION

#### Manipal University Jaipur

Jaipur, India

Bachelors in Computer Science and Engineering: CGPA: 8.9/10.0 Most Recent GPA:  $\hat{9.9}/10.0$  (5th Semester)

Aug 2016 - Present

### St. Alovsius Senior Sec. School

Jabalpur, India

Class XII Board (CBSE); Percentage: 83%

Jabalpur, India

St. Aloysius Senior Sec. School Class X Board (CSE); CGPA: 9.4/10.0

2014

2016

### About Me

I am a motivated person capable of working in a team as well as an individual contributor. I like learning new technologies. In my Leisure, I engage in football and listening to music.

### SKILLS SUMMARY

- Programming Languages: Python, JavaScript, Unix, C, HTML & CSS, Latex scripting, XML(for Android), Assembly
- Frameworks: Tensorflow, Keras, Bootstap, Django, Flask, OpenCV, Basic python libraries(Numpy, Matplotlib, Scikit)
- Databases: MongoDB, SQL
- Software: Jupyter Notebook, Jetbrains Pycharm IDE, Anaconda, Android Studio, Adobe Premiere Pro, Adobe Photoshop
- Documentation: Latex, UML, Diagrammer

### Work Experience

#### **Dell International Services**

Bangalore, India

May 2019 - Present

- Summer Intern Global Operations Engineer
  - Worked on the development of a supplier profile chatbot using the RASA framework. Increased the number of Rasa intents from 100 to 9600 using automated script thereby diversifying the dataset available for training the Skype chatbot, increasing average accuracy of rasa model from 75% to 98%. Created a Chatbot UI using javascript for front end and python for backend. Integrated chatbot UI on every page of supplier profile UI. Worked with technologies like pivotal cloud foundary to deploy the web app.
  - o Performed Behaviour driven testing of feature files written in gherkins. Used behave-python and selenium web driver to interact with the browser. Created an all inclusive Proof of concept which fetched user stories from TFS Dell and ran them in a browser. Worked on frameworks like Allure to generate test reports.

### Manipal University Jaipur

Jaipur, India

Research Intern (Mentor - Monika Jain)

Sep 2018 - Oct 2018

- Worked on building an object detection interface to be incorporated in a device designed to help visually challenged people navigate. Used the YOLO (You only look once) dataset weights to train a tensorflow API model and perform object detection
- Incorporated the use of a PC web cam by using OpenCV library to detect live objects. Improved the frame rate of video display by using a smaller YOLO weight file

#### Indian Institute of Technology BHU

Varanasi, India May 2018 - July 2018

Summer Research Intern

• Led a team of 4 interns at the Summer workshop for Deep Learning and Computer vision at IIT BHU. Developed an android application which detected handwritten characters drawn on a canvas with 89% accuracy.

• Trained a Keras model using the EMNIST handwritten characters dataset and froze and exported a protobuf file to be used in the application. Authored a research paper on the same topic. (Details of which are mentioned in the Publications and Research works section)

## Flask UI for an Interactive AI "JARVIS" Chatbot

Minor project - II

- Worked on the Development of 2 seperate User Interfaces of chatbot. The first interface used simple JavaScript for interacting with the chatbot developed in the first phase of the minor project. The user could switch easily between the two chatbot techniques (Retrieval based and Generative technique) and compare chatbot performance in real time using a switcbox
- The second interface used Google's Text to Speech API and was a voice based chatbot. Implemented a mechanism to listen for a trigger "Jarvis" even if it occurs in the middle of the sentence.

# 4G and 5G network implementation and comparison in CISCO packet tracer

April 2019

March - April 2019

Computer Networks Project

- Implemented a 4G architecture (using IPv4 addresses) and compared it with a 5G architecture (using IPv6 addresses) in Cisco packet tracer as part of Computer Networks course.
- Demonstrated the security differences in both architectures using VPN.

### Tensorflow chatbot using Reddit dataset

January - March 2019

- Minor Project I
  - Worked on developing a chatbot as part of Minor Project. Used the Reddit comments dataset to train a Google NMT tensorflow model which used an RNN architecture with bi-directional LSTM.
  - Created a conservative chatbot in cmd using scoring mechanisms which provided scores to every output result based on several factors (profanity, completion of sentence etc.).

## OPENGL - Flappy Bird game

March 2019

- Computer graphics and Multimedia project
  - Developed a replica of flappy bird game using SFML library in OPENGL as a part of Computer Graphics and multimedia course.
  - Made the game easier and less frustrating by decreasing gravity in the game environment and giving more control of the bird to the player.

### Dementia Classification using Longitudinal MRI data

March 2019

Data Science Project

- Explored the MRI longitudinal dataset visually using python matplotlib library as part of the data science course.
- Trained several ML models present in sklearn library of python and created a command line interface to provide input and predict whether given MRI test case is demented or not.

#### Inventory management using Machine Learning

November 2018

Dell hackathon

- Developed a GUI to input product features and predict the probability of it being sold if certain conditions of it's sale are altered.
- Trained a keras model with a randomly generated dataset to demonstrate the usage of Deep Learning in inventory management.

# • Facial averaging (Koinophilia) Research / Survey

October 2018

- Generated a dataset of the attractiveness of individual and averaged faces by crowd sourcing a survey in Manipal University Jaipur.
- Authored a paper (details mentioned in the Publications and Research works section) which concluded with an
  hypothesis stating that averaging of Nose among other facial components yielded a comparatively higher
  attractiveness in case of men and averaging of lips yielded a comparatively higher attractiveness in case of
  women.

### File Sorting in Android using Quicksort

October 2018

Analysis of Algorithms Project

 $\circ$  Developed an android application which used Quicksort for sorting files based on their sizes in O(nlogn) time.

• Programmed the Quicksort algorithm in JAVA. The application was developed and documented as part of the Design and analysis of Algorithms course.

### Financial Portfolio tracker - Android

Software Engineering Project

- Developed an Android application which helped the users to track their finances in several domains (Expenses, Gold, Real Estate and Mutual Funds).
- Integrated the application with SQL database and documented the application (SRS, SA/SD, UML, Test Suite), using UML case tools as part of Software engineering course.

### Virtual Memory Manager - Unix

April 2018

October 2018

- Operating Systems Project
  - Implemented a C program that successfully simulated the steps involved in translating logical to physical address.
  - The C code read from a text file containing logical addresses and used a Translation lookaside buffer (TLB) as well as a page table to translate the corresponding logical address to its physical address and also display the value of the byte stored at the translated physical address.

### • Online Job Resume / Portfolio builder - Web Development

December 2017

- Worked on development of a Fullstack website for Job portfolio creation. The website allowed the user to register themselves in the portal, as well as login and view their profile.
- The front-end of the website was implemented using Bootstrap, HTML/CSS and Javascript. The backend was developed using PHP and MySQL database. This website was submitted as the final project for the completion of a web development course by Forsk Tech, Jaipur.

### • Dragon in Dubai - Maya 3d Animation

June 2017

- o Animated and rendered a downloaded skin of a dragon using the animation software Maya.
- Exported the video to Adobe Premiere pro and integrated it to a live video of Building's to give an illusion of a dragon over the skies of Dubai.

# Relevant courses undertaken / Ongoing

- ANALYSIS OF ALGORITHMS
- DATA STRUCTURES
- DATA SCIENCE
- SWITCHING CIRCUITS AND LOGIC DESIGN
- SOFTWARE ENGINEERING
- COMPUTER ORGANIZATION AND ARCHITECTURE
- IMAGE PROCESSING
- OPERATING SYSTEMS
- COMPILER DESIGN AND AUTOMATA THEORY
- OPERATING SYSTEMS
- COMPUTER NETWORKS
- DATA COMMUNICATIONS

#### Publications And Research Work

### • Handwritten Text recognition using Android, IJEAT 2019

January 2019

o Authors: **Shubham Mor**, Shivam Solanki, Saransh Gupta, Sayam Dhingra. ISSN: 2249 8958, Volume-8, Issue-2S2, January 2019.

### • Human Perception of an Attractive Face

November 2018

o Authors: **Shubham Mor**, Sai Deepak

# Workshops / MOOCs

 $\bullet$  COURSERA - Machine Learning by Andrew N.G

Advanced Machine Learning specialization)

• COURSERA - Basics of deep learning by National Research University Higher School of Economics (Part of • COURSERA - Natural Language processing by National Research University Higher School of Economics (Part of

- UDEMY Hands on Tensorflow by Mammoth
- UDEMY Django (with python) E-commerce website development
- Android application development workshop at MUJ
- Big Data and Hadoop workshop conducted by IIT Guwahati

### Positions of Responsibility

### • Event Organizer

January 2018

- Worked in the Events organizing committee for E-Conclave, the entrepreneurship fest of Manipal University, Jaipur.
- Organized several events including Mock Interviews, Group discussions etc. Also hosted the quiz held among the events.

# • Sponsorship / Food Outlet Organizer

October 2017

• Worked in the Stalls organizing committee for Oneiros 2k17, the cultural fest of Manipal Jaipur. Acquired sponsorship of a restaurant "Vibes, Malviya Nagar".