Rishabh Nanawati

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Education

M.S.E. in Computer Science — Expected Graduation Dec. 2024
Whiting School of Engineering — *Johns Hopkins University, USA*

- Current Courses: Introduction to Algorithms, Computer Vision, Information Retrieval and Web Agents

Bachelor of Technology (Honors) — Graduated Aug. 2021
Mukesh Patel School of Technology, Management & Engineering — *NMIMS University, India*

- CGPA: 3.22/4.00
- Major: Computer Engineering
- Minor: Artificial Intelligence & Machine Learning

Work Experience

NLP Engineering Associate — Feb. 2022 - Sep. 2022
Dimensionless Technologies — *Mumbai, IN*

- Worked on three projects: a call auditing system for ICICI Securities to analyse the performance of their telemarketers, a call analysis application that analyzes calls in real-time to recognize scams and a bot that replies to common twitter queries for a regional airline.
- Created custom speech-to-text models using Azure's services to catch keywords specific to each project's usecase and improve the accuracy for Hinglish speech-to-text models.
- Developed an Natural Language Understanding (NLU) pipeline for real-time call analysis, which processed raw data using NLTK and Spacy, performed named entity recognition (NER) and handled intent classification using pretrained models of RASA.
- Created a program to retrieve tweets that mention particular users, formulate replies to common queries using a RASA pipeline and tweets an appropriate response accordingly.

Co-founder — Mar. 2020 - Dec. 2021
Curabit (curabit.in) — *Mumbai, IN*

- Developed a web application to store client data and remotely control previous developed VR applications using HTML/CSS, Flask and MongoDB. This web application was used by psychologists to administer VR-based therapy sessions. Hosted at app.curabit.in.
- Supervised development of an application for VR headsets to play 360 videos using C# and Unity3D engine. Tested on Pico G2 VR headset.
- Designed and produced various VR scenarios with carefully placed triggers to treat mild psychlogical disorders like social anxiety, agoraphobia, acrophobia, etc with a team of psychologists.
- Successfully secured a seed fund grant from The Resolution Project along with a fellowship.
- Led the operations of headset procurement and systems deployment. Managed all internal IT solutions such as Asana, Google Workspace and Wix for organization's productivity and marketing needs.
- **Co-authored** a technical chapter in Apr. 2022 titled "Use of Virtual Reality in Exposure Therapy and Other Psychological Treatment Methods", published in the 1st edition of "Multimedia Computing Systems and Virtual Reality" by CRC Press. (link, pdf)

Academic Projects

Deep Compression using Autoencoder | *Using FastAI, Scikit-learn & PyTorch*

- Compresses data from 4 variables to 3 variables, and then to decompress it with minimal loss.
- Achieved MSE of only 0.376% upon reconstruction.
- Part of evaluation task for CERN's Google Summer of Code program.

Natural captioning of images | *Using Scipy & Keras*

- An image-to-caption model, that can produce descriptions for real world images.
- Model consisted of a pre-trained InceptionV3 CNN that extracted features from images and an RNN that employed LSTM to first train on a thousand pre-captioned images and then generate captions for any given image.

Sign Language Interpreter | *Using OpenCV, Scipy, tcl/tk & Keras*

- Translates given sign language gesture to their textual representation using image pre-processing techniques, KANE feature extraction and cosine distance matching.
- Predicted 44 characters in the ASL with a prediction accuracy >90%.

Technical Skills

Languages: C, C++, Java, Python, SQL
Frameworks: Flask, Android Studio
Developer Tools: Git, Docker
Libraries: Tensorflow, Scipy, Turicreate/GraphLab, PyTorch, OpenCV
Graphics/FX: Photoshop, Illustrator, Premiere Pro, After Effects

Extracurriculurs

- Facilitated communication between professors and students on issues related to teaching styles, curriculum and schedules as the student representative of my class during the years 2018-2021.
- Won a fellowship in Jun. 2020 (including a funding grant) from The Resolution Project (NY, USA) for the work on Curabit. Later, Was ranked among the Top 50 Ideas for Healthcare Innovation by ZS Prize in Jan. 2021 and was awarded Change Maker Award by American Society of Mechanical Engineers (ASME) in Dec. 2021.
- Presented with Student Ambassador Award in Aug. 2021, by NMIMS University for my academic performance, innovative projects and winning several accolades on national and international level.
- Joined the MUN Society of my college in Feb. 2019 as an executive in the digital creative department, created graphic designs as per the needs of the society. Headed the digital creative department at MUN Society, Apr. 2019 onwards, where I mentored 12 executives on the graphic design work. Elected as Charge D'Affaires of the society in Jun. 2020 and led 100+ volunteers to organize various events and conferences around the themes of debates and public policies.
- Served as the USG Design and Media for Mumbai MUN, India's biggest MUN conference, in Oct. 2019. In Oct. 2020, served as the Vice President of Mumbai Yuva Sansad, India's largest online Youth Parliament, which was attended by over 400 delegates.
- Ranked 2nd in the coding competition "Runtime Terror", organized by The WhiteHat Cell of MPSTME, NMIMS University in Jul. 2020.