Ashwin Shenolikar

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EDUCATION

Virginia Tech **08/2021 – Ongoing**
*MEng in Computer Science and Applications - **xx*** *Falls Church, USA*

University of Mumbai **08/2016 – 11/2020**
*BE in Computer Science - **CGPA*** *Thane, India*

COURSEWORK

- Advanced Machine Learning
- Urban Computing
- Object Oriented Programming Methodology
- Information Security
- Data Structures & Algorithms
- Operating Systems
- Database Management System (DBMS)

PROJECTS

Music Genre Classification | Python, Keras/ Tensorflow, Google Colab, Librosa, Machine Learning

- Studied and worked on raw audio data in the context of training machine learning models using keras, numpy and the librosa libraries. The latter in particular is used to work with audio data. .
- Worked on raw audio and performed feature extraction to feed the Machine Learning Models.
- Models trained using tensorflow: ANN, SVM, KMeans, LSTM

Vehicle Classification | Numberplate Detection | Python, NLP, Convolutional Neural Network

- Final Year Project for BE:
- Two Part project: 1. Object Classification and 2. Number-Plate Detection.
- Used the then state-of-the-art image classification model You Only Look Once(YOLOv3) to perform image classification to detect vehicles, vehicle type(Light/Heavy/Bike), and pedestrians using the UA-DETRAC Suite for model performance.
- Trained a dataset of vehicle images to transform data so that the numberplate can be extracted.
- This is followed by using scikit and NLTK to recognize the text on the number plate.
- The goal of this project is to detect traffic rule violations so that the third step can fine the violators with backend implementation.

Maze Solving Bot - Meshmerize | C++, Arduino,

- Part of IIT Bombay's Meshmerize Competition
- Constructed a physical bot using arduino as the processor with additional components.
- Software Implementation: Recognize path and turns, implemented an optimization algorithm to derive best path from a given path succesfully.

INTERNSHIP

Nucsoft Ltd **06/2019 – 07/2019**
Summer Intern *Mumbai, India*

- Tech Stack:C++, ESP8266, Arduino, HTML, JavaScript
- Implement an IoT application to regulate and optimize energy usage of an office environment.
- Used an ESP8266 module with NodeMCU to use IR blasters to regulate Air Conditioning and regulate though a central web server.

TECHNICAL SKILLS

Languages: Python,R, Java, C, C++, JavaScript, MySQL, C, MATLAB
Developer Tools: VS Code, Google Colaboratory,Jupyter Notebook, Arduino IDE, AWS, Latex, Tableau
Technologies/Frameworks: Linux, GitHub, Git, numpy, pandas, sci-kit Learn,matplotlib, keras, tensorflow, PyTorch, Tkinter, Django, Apache

EXTRACURRICULAR

Innovation Campus **01/2021 – Present**
Student Assistant *Alexandria, VA*

- Event Organization and Technical Support at VT Innovation Campus HQ

CERTIFICATIONS

- Deep Learning Specialization
- Reinforcement Learning
- Google Cloud Infrastructure
- Machine Learning
- Advanced Java
- Tableau
- Arduino and C