SHAWN GONSALVES

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EDUCATION

- Master of Science, Computer Science, California State University, San Marcos.
  August 2019 - May 2021, GPA: 3.5
- Bachelor of Engineering, Computer Engineering, Mumbai University.
  July 2015 - May 2019

TECHNICAL SKILLS

ML Libraries: Numpy, Pandas, Tensorflow, Keras, Tensorflow-JS, Scikit-learn.
Programming Languages: Python, C, Java, Prolog.
Tools: Anaconda Navigator, Eclipse, Unity, , Android Studio, Visual Studio, Git (version control), GitHub, Apache AirFlow.
Cloud-Based Technologies: Amazon Web Services, Google Cloud Platform, Firebase.

EXPERIENCE

Using Neural Nets and TensorFlow to detect the presence of Pneumonia in a Patient(May 2020 - April 2021)
https://github.com/shawngonsalves/PneumoniaDetection-Deployment
Technology and libraries - Python, Keras, Tensorflow, Tensorflow-JS

- Developed a Convolutional Neural Network model from scratch that detects the presence of pneumonia in a patient and significantly reduced the response time from 2days to 10 seconds.
- Implemented Keras on top of Tensorflow, applied Data augmentation, and tuned the hyperparameters to improve accuracy from 77% to 94.84%, and loss from 0.2 to 0.1260.
- Experienced moving trained ML model into production by deploying it on a web server using Tensorflow-JS.
- One of the top candidates to receive scholarship from the University, for complete execution and deployment of the Project.

PROJECTS

Data Modelling on Alzheimer Data using Genetic Algorithm, Differential Evolution and BPSO(Sept 2020 - Dec 2020)
Technology and libraries - Python, NumPy, Pandas, scikit-learn
ML techniques: Multiple Linear Regression, Support Vector Machine, Artificial Neural Network.
• Evaluated the model on three ML algorithms using the concepts of Genetic Algorithm, that creates generations of the model to track the fitness value at each generation to find the optimal model with highest prediction accuracy.
• Added a routine for a function that deletes all the invalid / junk values from the data and returns a sorted and rescaled version of the data, thereby significantly reducing the Root mean square error from 2.55 to 0.953.
• Proficient in analyzing data and developing ML models using Python.
• Implemented key features like Data Cleaning, Data preprocessing and Data Modelling on extracted Alzheimer Dataset.

Face Detection and Image Analysis Using Amazon Rekognition(Oct 2020 - Dec 2020)
Language and Technology - Python, Amazon Web Services
AWS Services: AWS Rekognition, AWS Lambda, AWS StepFunction, Amazon S3, AWS Elastic Search, AWS CloudFormation.

- Researched on implementing AWS Rekognition APIs in conjunction with other AWS services to build a system that can apply pre-existing AWS Rekognition filters to filter out photos that meet specific criteria.
- Gained a good learning experience by practically applying cloud services, understand how powerful the services are, and how to use them together in tandem.

Voice-Based Email for the Blind(June 2020)
Technology and Libraries- Python, Speech Recognition, get-text-to-speech, smtplib, PyAudio, BeautifulSoup
• Implemented Python automation using different libraries and modules to help the blind access the email using just their voice.
• Completely eliminated the use of keyboard and mouse as the system prompts the user with voice commands.
• Developed a feature in the system that reads out the latest unread email sent to the user.

PUBLICATIONS

Artificial Intelligence and its related Application in the Processing of Natural Language
http://ijircce.com/admin/main/storage/app/pdf/bmdolVbqZI3aCFB73aHCGWXbOMHtOOSdHWMZi3eM.pdf
International Journal of Innovative Research in Computer and Communication Engineering(IJIRCCE)
July 2018, Volume 6 Issue 7.

CERTIFICATIONS

- Coursera - Crash Course on Python
- Udacity - Introduction to Tensorflow for Deep Learning
- Coursera -Browser based Models with TensorFlow.js
- Educative – An Introduction to Apache AirFlow