VEDANT SAHAI

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Summary: Highly driven computer science undergraduate seeking opportunities where I can expedite my knowledge of Artificial Intelligence and Blockchain

EDUCATIONAL QUALIFICATIONS

B.E Computer Engineering | Fr. Conceicao Rodrigues College of Engineering **2017 - 2021**
- Current standing CGPA – 9.41 (On a scale of 10)

12th Grade | Higher Secondary Certificate (HSC) - 82.33% 2017

10th Grade | Indian Certificate of Secondary Education (ICSE) - 92.33% 2015

EXPERIENCE

Artificial Intelligence Research | Sync Energy Inc, New York, USA July 2020 – Present
- Python-Flask based API deployed on AWS cloud for extracting power outages statistics when state name or district name or Lat/Long are given as inputs
- Python RASA based chatbot for the using power outages API
- Successfully presented (later to be published in IEEE Explore) paper titled "***Knowledge Mining for Defining Systemic Engineering Practices***" at the 4th IEEE International Conference on Electronics, Communication and Aerospace Technology - ICECA 2020
- Utilizing Deep Learning techniques to Identify Utility Poles with Crossarms and Estimate Their Locations from Google Street View Images

Software Developer | Mumbai International Airport Ltd (CSMIA) Jun 2019 – July 2019

Completed three projects in two months which are as follows:
- **I**ntegration of Airside Safety Management Application {AngularJS and Microsoft SQL Server database-based framework system} with Incident Monitoring System {Microsoft SQL Server database and .net based entity framework}
- Integration of Payment Module with the KIOSK
- Establishing a communication link between the ATS and the Flight Feed Server - Python script which was responsible for sending a SOAP request to the Flight Feed server and in response get the XML data and store it in a .txt file. The complete process was scheduled with Crontab and Shell Scripts

Software Intern | Mavericks UAS, Fr. Conceicao Rodrigues College of Engineering June 2018-June 2019
- Constructed and Programmed autonomous hexacopter and quadcopter drones with obstacle detection & avoidance, self-navigation and payload handling capabilities

PROJECTS

Medical Analytica April 2020 -Present

A RASA based therapy chat-bot for emotion analysis and visualization. We have developed a chat companion to make the user feel better and to track analysis of the user's behavior

Leveraging Conversational AI for Secure Healthcare Assistance Mar 2020 – Present

Using BigchainDB as a decentralized database we have attempted to develop an end to end system for successful storage, transfer and tracking of patient healthcare data. All records are encrypted using AES-256 encryption and the access for this data is transferred through blockchain and asymmetric cryptography. Due to limited blockchain data storage, files are being stored in IPFS.

COVID19 Face Mask Detection and Facial Recognition May 2020 – Aug 2020

Face Mask Detection system built with OpenCV, Keras/TensorFlow using Deep Learning and Computer Vision concepts to detect face and recognize the faces in real-time

Research paper, based on this project, titled "***Leveraging Deep Learning and IoT for monitoring COVID19 Safety Guidelines within College Campus***" has been accepted in and invited for the ***10th International Advanced Computing Conference CCIS Series of Springer*** on 05th & 06th December 2020 at Taj Vivanta Goa, Panaji

Deepfakes with Keras-GANs May 2020 - Jun 2020

The project is based on a systematic approach to learning DCGAN or Deep Convolutional Generative Adversarial Network and trained the network to generate realistic-looking synthesized images using Keras

Sentiment Analysis with Deep Learning using BERT & PyTorch May 2020 - Jun 2020

The project is based on a systematic approach to learning analyzing datasets for sentiment analysis, how to read it in a PyTorch BERT model and adjust the architecture for multi-class classification. I built a Sentiment Analysis model leveraging BERT's knowledge

Attentiveness and Attendance Detection Problem Aug 2019 - Dec 2019

Built an end-to-end architectural system that incorporates human pose estimator, emotion recognition and head gaze deep learning model into a customized neural network Intelligent Classrooms

Context Classification from audio conversations Jul 2019 - Oct 2019

The project is based on a systematic approach to convert a voice-based conversation between a customer and service centre and find out the context of the conversation and classify it accordingly

Web-App for Presenting Obstacles Around an Aerodrome
Using Google Earth Pro & HereMaps API Feb 2019 - Apr 2019

Records of all the obstacles such as the trees, buildings, hoardings, towers etc., located around an airport's aerodrome are maintained in AD 2.10 section of the AIP documentation which is published on the Airport Authority of India's. Through this system, one can plot these obstacles in 2D and 3D objects on Google Earth Pro (3D) and HereMaps (2D)

Classification of skin diseases using Convolution Neural May 2019 - Jul 2019

The project is based on a systematic approach to learning Neural Network-based algorithms based on which I tried to explore the field of Data Science. The project involved the classification of skin diseases based on images clicked by the user

PUBLICATIONS

M. Mehra, Vedant Sahai, P. Chowdhury and E. Dsouza, "Home Security System using IOT and AWS Cloud Services" *2019 International Conference on Advances in Computing, Communication and Control (ICAC3)*, Mumbai, India, 2019, pp. 1-6, DOI: 10.1109/ICAC347590.2019.9089839.

ACHIEVEMENTS

- Secured **5th position** *at India Singapore Hackathon 2019* (International Level) Sept 2019
- Secured **4th position** at *AI Hackathon 2019* (National Level) Sept 2019
- Part of Team Mavericks who **won** the "**Joe Sportsmanship Award**" at *"Association for Unmanned Vehicles Systems International Student Unmanned Aerial System Competition 2019*" (International Level) June 2019
- **Winner** of *Smart India Hackathon 2019* software edition (National Level) March 2019
- **Runner-Up** in Techno Talks 2018 competition at *Fr. Conceicao Rodrigues College of Engineering, Mumbai* (District Level) March 2018

ACADEMIC ACTIVITIES

- **Participated** in various **Local**, **National** and **International Hackathons** January 2020
- **Active participation** in College level activities like **Dance**, **Intra-Tournaments** & **Social Services** 2017-2019
- Conducted a workshop on **"Introduction to Arduino"** with Team Mavericks UAS at Fr. Conceicao Rodrigues College of Engineering Sept 2018
- Conducted Workshop on **"Deep Learning"** by Shaunk de with Team Mavericks UAS at Fr. Conceicao Rodrigues College of Engineering Sept 2018
- **Technical Editor** at Fr. Conceicao Rodrigues College of Engineering college *magazine "**Fragmag-2018**"* March 2018

TRAINING & CERTIFICATIONS

- **JP Morgan Software Engineering Virtual Experience** by *InsideSherpa* May 2020
- **AI for Everyone** & **Deep Learning Specialization** by *deeplearning.ai* April - May 2020
- **AWS Fundamentals: Going Cloud-Native**, **AWS Fundamentals: Migrating to the Cloud** & **AWS Fundamentals: Building Serverless Applications** by *Coursera* April - May 2020
- **Machine Learning A-Z: Hands-on Python & R In Data Science** by *Udemy* April 2020
- **Deep Learning Using TensorFlow** by *CognitiveClass.ai* April 2020
- **Blockchain A-Z™: Learn How to Build Your First Blockchain** by *Udemy* Jan 2020
- **Machine Learning and AI using Python** workshop conducted by *ATS Learning Solution* in association with *Microsoft* Aug 2019

TECHNICAL SKILLS

- Advanced working knowledge in **C, Java, JavaScript, Python, HTML, CSS**
- Practical Experience in **IoT, Deep Learning, Natural Language Processing** and **Computer Vision**
- Adept at **UAV systems & its construction** and **Server Programming.**
- Adept at **problem area identification, planning** & **implementation** and **Linux Systems**
- Practical Experience in **Blockchain**, **AWS**, **Docker**, **Knowledge Graphs, APIs** and **Databases**
- Research skills such as **technical writing, paper presentation and problem-solving**