SIDDHANT JAIN

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# EDUCATION:

* **University at Buffalo, New York Aug’ 23 – Dec’ 24**
  + **Masters in Science, Computer and Information Sciences.**
* **Vellore Institute of Technology, India Aug’ 19 – June 23**
  + **Bachelor of Technology, Computer Science with Business Systems CGPA: 8.3**

**Relevant Coursework:** Computer Networks, Cloud Computing, Database Management Systems, Microprocessor Architecture, Big Data, Data Structures and Algorithms, Microprocessor Architecture, Wireless Sensor Networks, Artificial Intelligence, Machine learning, Deep Learning, Operating Systems, Computer Security, Operating Systems.

# SKILLS:

* **Languages**: Java, C, C++, Python, C#, SQL, NoSQL, JavaScript, CSS, HTML, XML, .NET, ReactJS, AngularJS, Node.JS, PHP, REST
* **Tools**: PowerPoint, Android Studio, Anaconda, VS Code, MS Excel, Google Colab, MS Word, MS Office
* **Frameworks:** Django, Scikit, NLTK, openCV, TensorFlow, Keras, Flask RESTful API, Pytorch
* **Platforms:** Windows, Linux, Web, MQTT, IBM Watson
* **Soft Skills:** Team Player, Leadership, Fluent Communication, Creative Writing, Time Management

# Deep Learning Skills: GNN (Graph Neural Networks), RNN (Recurrent Neural Networks), CNN (Convolutional Neural Networks), NLP (Natural Language Processing), NST (Neural Style Transfer), GAN (Generative Adversarial Networks), Autoencoders, Transfer Learning, Reinforcement Learning, Attention Mechanisms, Variational Autoencoders (VAE), Long Short-Term Memory (LSTM), GRU (Gated Recurrent Unit), Deep Q-Networks (DQN) etc.

# WORK EXPERIENCE:

* **Vriddhi Software Solutions, Pvt. Ltd. Apr’ 22 – May’ 22**

**Software Developer (Intern) Nashik, India**

* + Executed ERP software for handling academic and financial information for about **200** educational institutes in India
  + Engineered **PL/SQL** packages, formulated functions and procedures to handle university data using **Oracle SQL Developer**
  + Used the YouTube Data API for **.NET** to upload and keep tracks of the video lectures in the Learning Management System
  + Developed the code in **C#** to access uploaded videos and also enabled real time data sharing, synchronizing and mirroring database in both: the windows-based application (offline) version and browser version of the software
* **The Intern Academy. Sept’ 21 – Oct’ 21**

**Python Developer (Intern) Nashik, India**

* + Enacted a bot using **Selenium** to automatically send birthday wishes to contacts from the database.
  + Drafted the automation bot to send the message through WhatsApp web interface automatically.
  + Used **JSON** commands to store the data for birthdates of contacts and saved them in the **json** file format.
* **IBM. June 21 – July 21**

**Artificial Intelligence Engineer (Extern), Bengaluru, India**

* + Created a web application to predict sales forecast of a store while working in an **agile** working environment.
  + Built the AI model based on **long short-term memory** to study and analyze previous data using **Recurrent Neural Networks**.
  + Executed fast debugs using **Flask**, **RESTful** request dispatching and **Jinja2** templating based on project requirements

# PROJECTS:

* **Categorization of Wheat Diseases (Final year project) May’ 23**
  + Used 4 CNN architectures **(InceptionV3, DenseNet121, MobileNetV2, and Resnet50V2)** on a CGIAR dataset with 3classes (Healthy wheat, Leaf rust and Stem rust).
  + Trained the models with and without data augmentation **(ImageDataGenerator, ImgAug and Pix2Pix GAN).**
  + Found that the accuracies of the models with **data augmentation** were higher than the accuracies without data augmentation.
  + The main aim of the research was to make the model more generalized so that it can perform well on any dataset.
* **Sentiment Analysis using Customer Reviews Mar’ 22**
  + Extracted product reviews given by customers using **Walmart API** and performed **Sentiment Analysis** using **Python**
  + Fetched product details using **Wapy.api** and performed linguistic analysis of its reviews to detect customer perceptions
  + Incorporated **NLP algorithms** to analyze positive/negative sentiments from a review for a particular Walmart product
* **Message passing System June’ 20**
  + Assembled a **NoSQL** database server with basic HTTP Asynchronous message passing using .**Net** framework created in **C++**
  + Implemented simplified checking in and checking out of files using GUI, developed using **WPF** with a versioning system
  + Executed sendMessage, receiveMessage, wait - system calls. Also, page-replacement algorithms, memory management, scheduling and deadlock detection.
* **Self-Driving Car App May’ 20**
  + Research oriented, open-source app to detect vehicles and pedestrians from live footage recorded from a moving car.
  + Used **Python** to do the backend coding, **OpenCV** Toolkit and **Haar** feature-based cascade classifiers.
  + Formulated the application using **Computer Vision** and **Artificial Intelligence** algorithms.

# PUBLICATIONS:

* **Rust disease classification using deep learning algorithms:** presented at Eurasia Conferences in Berlin. (May’ 23)
* **Medify Chatbot:** Based on the project that answers user queries and diagnose diseases and enables to book appointment with the specialist in the user’s area. (Journal: IJARCCE) (Sept’ 22)
* **Dashboard for monitoring real time data in educational organization:** dashboard to monitor the entire Academic and Administrative work of students and faculties to reduce the man-hours of any college. (Journal: IJAEM) (Oct’ 20)
* **Initial Coin offering for financing new ventures:** Review about literature on entrepreneurial finance by the introduction to Initial Coin Offering. (Journal: IJARCCE) (Sept’ 20)

# VOLUNTEER EXPERIENCE:

* **Member of Rotaract Club, VIT Vellore, India:** Organized many Seminars on awareness programs and also volunteered in many social-work in the near villages. (Sept’19 - Oct’21)
* **Core committee member at IEEE TEMS Student Chapter VIT Vellore, India:** Organized technical and management workshops for 500 students and helped develop a website for IEEE VIT Chapter. (Sept’19 - Apr’20)