# Siddarath Vats

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## Education

**Adani Institute Of Infrastructure Engineering** *Ahmedabad,Gujarat*

Bachelor of Engineering in Electrical Engineering *1st June 2021*

**CGPA** (on scale of 10) — *8.4*, **GPA** (on scale of 4) — *3.4*

## Skills

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|---|---|
| **Languages** | Python, R, MATLAB-2020a, Octave, SQL |
| **Technologies** | Supervised and unsupervised learning,deep learning algorithms, Web scraping, Big Query, Simulink, Latex,Version controlling, Data Pre-processing |
| **Frame-works** | Scikit-learn ,TensorFlow ,Keras, OpenCV, PyTorch, Selenium, Advance Pandas, |
| **Sports** | Table Tennis, Cricket |

## Work Experience

**Assistant Manager- Data Analytics at Adani Green Energy Ltd** *Ahmedabad, Gujarat*

Role : Junior Data Analyst *13th july 2021 - Present*

- Implemented a complete end to end applications which provides the detailed information of entire portfolio using python language as back-end and Power-bi as front-end service. These applications are termed as 'Solar Portfolio' and 'Wind Portfolio'.
- Data extraction from several sources like xlsx, pdfs, json, websites, images, etc using comprehensive python scripts, which is Pre-processed and stored in SQL database and refreshed in various Power-Bi Dashboard at daily basis.
- Performance monitoring of solar plants using advanced analytical algorithms like SVM, ANN, LSTM,etc.

## Research Projects

**Development of Smart Grid using ML algorithms** *Ahmedabad, Gujarat*

Role : Simulation Engineer and Data Analyst *During Studies*

- Implemented a Custom Simulation of a hypothetical power system according to IEEE five bus standards in MATLAB-2015b
- The goal of simulation was to generate a time series data-set and obtain adequate number of clusters using KNN clustering which was then fed into supervised learning algorithms so they can distinguish between various power system abnormalities like power swing, line faults etc.

**Fault Identification in WECS using supervised learning** *Ahmedabad, Gujarat*

Role : Simulation Engineer and ML Programmer *During Studies*

- Prepared and analyzed a custom simulation of Wind Power system system which mimics the behaviour of standalone DFIG WECS(Wind Energy Conversion System) of operational frequency at 60Hz and then data was extracted via Multi-Run.
- The final result were fed into 4 Machine learning algorithms,they were D-Tree, Logistic Regression, SVC, and KNN furthermore results were compared and examined in form of confusion matrices and graphs.

**Data-driven Techniques to distinguish between Faults and Power swings** *Ahmedabad, Gujarat*

Role: Head researcher and Mentor *During Studies*

- Reviewed all the existing technologies which can used to differentiate between three-phase faults and power swings.
- The review paper is successfully published in Nova Science Publishers.
  link: `https://novapublishers.com/shop/research-challenges-in-science-engineering-and-technology/`

## Industrial Projects

**Development of real time dashboard for Deviation Settlement Mechanism** *Ahmedabad, Gujarat*

Role : Lead Developer *Jan'23*

- Our team created a custom dashboard which tracked and calculated real time DSM penalty for renewable power plants. The data is fetched via web-scrapping and comprehensive python scripts are used for data analysis and the same is stored in Big query and represented in Power BI dashboard.
- I was awarded with silver coin and spot recognition embarking my contribution for the development of dashboard