**VIVEK**

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**Summary**

An experienced AI & Analytics Lead with MS degrees in Engineering and Data Analytics and 11 years of expertise in quantitative research, AI product development & delivery, cloud engineering, project management, and public speaking. Created Data Science and machine learning bootcamps for professionals to help them fast-pace their entry to the Data Science domain and provide career mentorship.

**Education & Achievements**

* **Executive** **MS Data Analytics:** Harrisburg University, 2019
* **MS Nanoscale Science:** University of Albany, NY, 2014
* **BTech Biotechnology:** National Institute of Technology, Raipur, India, 2011
* Executive Data Science Specialization: John Hopkins University, 2014-2015
* Alteryx Designer Core Certification, 2019
* LinkedIn skill badge, 2022: Machine Learning
* LinkedIn skill badge, 2022: Python
* LinkedIn skill badge, 2022: AWS

**Seminars & Talks**

* Guest panelist- Virtual AI Summit, Rework, 2023
* Speaker- Role of AI in Smart Cities Development: AI Summit, Javits Center, New York, 2022
* Speaker- Role of AI in Healthcare: Current Developments in Diagnosis and Vaccine Research: International Webinar Series, Shobhit University, India, 2021
* Speaker- Industry Readiness in the era of Data Science and AI: New GEC, Raipur, India, 2020
* Speaker- Perceive AI 2020 by Clarifai, NY

**Skills**

Soft Skills Team Leading, Public Speaking, Technical Writing, Project Management, Emotional Intelligence

Domain Knowledge Mobility Innovation, Market Research, Fintech, Healthcare Analytics, Data Science, Data Engineering, Machine Learning, Semiconductors

Data Science Tools Python, Linux, R, Tableau, Scala, PySpark, AWS (Sagemaker, EMR, S3), SQL, MongoDB, Dockers, Kubernetes, H2O.ai, Databricks, Airflow, PyTorch, Git

Machine Learning Generative AI, Statistical Modeling and EDA, Supervised Learning, Unsupervised Learning, Time Series Analysis, Computer Vision, Web Scrapping, Natural Language Processing, Reinforcement Learning, GRPC

**Professional Experience**

**Toyota Connected Aug 2022- Present**

**Data Scientist NYC**

* Designed and created a project automation in Airflow. It performs ETL on Plug-in hybrid vehicles data followed by generating a PowerPoint presentation with dashboards for the management.
* Collaborated with platform engineering and AWS support teams and delegated tasks to troubleshoot bugs in the Managed Airflow which is critical for all the mobility teams within TCNA.
* Trained cutting edge stable diffusion model with profanity filters which takes Lexus cars images as input and generate cool results with user-specific text prompts. The project involved direct participation of the CEO and CTO and was showcased during the holiday party. The base model was fine-tuned to feature the product at the New York International Auto show, 2023.
* Led a team of ML Engineers and identified customer usage patterns in hybrid vehicles which will be incorporated into the new segment of cars produced in 2024.

**Micron Feb 2022- July 2022**

**Sr. Data Scientist Remote**

* Part of the project initiative to simulate company’s IP in device design using reinforcement learning models and compare its efficiency with standard software including Synopsys VCS.
* Responsible for models’ performance comparison through metrics like code path sequence and total coverage.
* Responsible for testing the ‘design under test’ codes and plotting the model’s performance with respect to different metrics.
* Managed unit testing, code integration and code standardization of multiple versions and git branches.
* Provided knowledge transfer to DevOps team and maintained confluence documentation of the project’s goals and progresses.

**AstraZeneca Mar 2020 - Jan 2022**

**NLP Data Scientist New York**

* Developed text summarization models for domain-specific documents in vaccine research which automates the documentation activities for R&D team in clinical research. This technology save the firm $12+ Billion annually.
* Created an architectural diagram of market research application highlighting all the steps involved including data mining, data migration, analysis, NLP, testing and cloud deployment.
* Worked on market research application for pharmaceutical products valued at $4 Billion and helped the Disease Management Platform team in parametric research of their pharmaceutical drugs.
* The project involved data mining from social media followed by sentiment analysis and topic modelling of drugs in AWS Cloud environment.
* Specific parameters responsible for sentiments were identified and then tested for analytical validity. The results were reported to the business enterprise team.
* The entire market research project was tested and then deployed in the AWS.

**PwC May 2019- Feb 2020**

**AI Tech Lead New York**

* Led an analytics team for an Artificial Intelligence program to create an intelligent voice assistant using AI, ML and NLP for enterprise level platform in Azure environment. The project cost was over $10 Million.
* Responsible for documentation of analytics steps involved and led the team of developers during knowledge transfer process.
* Investigated the root cause of data pipeline failure with the help of Microsoft’s expert team and managed causative action.
* Responsible for daily analytics report preparation for leadership team meeting and oversee actionable items in VSTS.
* Managed strategic development operations and coordinating with multiple teams including BA, Data Engineering, Data Architecture, QA, Cloud Platform, DevOps, App Support and GHS.

**Infinity Tech Group Apr 2017 - Apr 2019**

**AI/ ML Scientist New York**

* Lead an analytics team of developers and analysts and performed data mining, pre-processing, and image labeling with different classes of posture followed by image augmentation.
* Developed a transfer learning model in Python/ TensorFlow environment to detect and classify changes in facial attributes.
* The web-browser based new models predicts facial gestures and classify different classes of postures from live webcam feeds with high level of accuracy which is 20% increase than previous team efforts.
* Developed a prototype of pill counting application in Python/ TensorFlow environment. The classifier detects pills shapes with 99% accuracy.
* This technology identifies 10 irregular pills per sec and helps save the company $2.5 million yearly in their manufacturing and packaging facility.

**IBM T.J Watson Research Center July 2015 - Mar 2017**

**Lead Process Engineer New York**

* Optimized wafer thickness measurement processes for new products and achieved 100% model accuracy for measurements of resistive memory devices.
* Led the process optimization of wafers for 3-D integration and quantum processors, through accurate measurements and quantitative data analysis, obtained 99% reproducibility rate within 6 months of operation and implementation.
* Responsible for documentation and modification of process flow charts and recipes at Materials Research Laboratory.
* Mentored and trained new employees on research projects and equipment troubleshooting and helped them getting assimilated into the company culture more effectively.

**BESS Technologies, LLC Aug 2014 – July 2015**

**Research Scientist Albany, NY**

* Designed process improvement projects for a cutting-edge battery technology development and performed experimentation, data collection, data pre-processing, data visualization and qualitative analysis, and increased the lifetime of Li-ion batteries by 40% in 6 months.
* Facilitated the process development steps through quantitative data analysis of spectral models obtained during spectroscopic experiments.
* Led the company’s vision in process reproducibility and innovation and initiated the prototype to production process.