VEDANT SAHAI

+1 (814)-769-0201 | vedantsahai18@gmail.com | Portfolio | LinkedIn

EDUCATION

Pennsylvania State University | University Park, PA *May 2024*
Master of Science in Computer Science *GPA **3.73***
- Teaching Assistant for CMPSC 132: Programming and Computation II: Data Structures

Fr. Conceicao Rodrigues College of Engineering | Mumbai, India *May 2021*
Bachelor of Engineering in Computer Engineering *CGPA **9.58***

EXPERIENCE

AI/ML Summer Associate *June 2023 – Aug 2023*
JP Morgan Chase & Co. | Wilmington, DE
- Implemented a robust PyTest-based testing framework to validate the Transaction Risk Modeling Team's entire Feature Engineering codebase, ensuring 90% code coverage.
- Designed a real-time recalibration system for the Transaction Risk ML model using the Online ML XGBoost algorithm, achieving a significant TDR and AUC gain of approx. 100-150 basis points.
- Developed a TabNet-based Deep Neural Network as a challenger for the TRS model with around 90% accuracy.

AI Product Manager *Oct 2021 – July 2022*
Plexflo | Mumbai, India
- Pioneered the development and launch of EVidence, an advanced P2P-SaaS software leveraging real-time smart meter data and industrial IoT devices, powered by plug-and-play AI algorithms with a latency of less than 90 milliseconds.
- Delivered a non-invasive load monitoring (NILM) AI open-source library called Plexflo based on a Time-series Segmentation model with an F1 of around 90%.
- Created a Rooftop Solar Assessment Flask API by employing Mask R-CNN Rooftop Segmentation and Geo-Spatial Image Processing techniques, ensuring compliance with SOC2 standards.

AI Research Intern *July 2020 – Sept 2021*
Sync Energy Inc. | Mumbai, India
- Developed and deployed AWS Lambda-Python-based Geo-Coordinates Power Outage API, optimizing power outage statistics extraction process, resulting in a 40% faster response time for outage analysis and resolution.
- Utilized Mask R-CNN to identify and estimate the locations of utility poles with cross-arms from Google Street View images with an accuracy of up to 83%, streamlining infrastructure assessment.
- Generated Neo4J-based knowledge graphs from research papers on wildfires and their effects on grid infrastructure.

SDE Intern *June 2019 – July 2019*
Mumbai International Airport Ltd. | Mumbai, India
- Unified the Airside Safety Management Application [AngularJS and Microsoft SQL Server framework system] with the Incident Monitoring System [Microsoft SQL Server database and .net system] increasing system efficiency by 10%.
- Programmed Python-Shell script to establish a communication link between the ATS and the Flight Feed Server as a backup.

SKILLS

Technical Languages: Python, C, JavaScript, Java, HTML5/CSS3 & LaTeX
Databases: MySQL, PostgreSQL, MongoDB & Neo4J
Cloud Technologies: Amazon Web Services [Ec2, S3, Lambda, API Gateway, Sagemaker, IAM]
Frameworks: Django, React.JS, Flask, FastAPI, PyTest, Elasticsearch, Git, Docker, PySpark, Grafana
ML Frameworks: PyTorch, Keras**,** TensorFlow, Rasa, Scikit, XGBoost, HugginFace, Nltk, Arduino, Spacy

PROJECTS

Datacertus *June 2021 – March 2022*
Reacts.JS, AWS APIs, Python, Docker, AWS ELB, AWS Lambda, DynamoDB, Scikit, RASA, PyTorch, Keras
- Created a full-service, low-code serverless **React. JS-AWS**-based Data Science platform to meet every B2B need.
- Engineered and trained ML models leveraging **PyTorch** and **Tensorflow**, and integrated IntellifaceTM interfaces for enhanced workflow efficiency; achieved a 30% decrease in training time and boosted model performance by 10%.
- Integrated the models using Lambda – S3 – API Gateway based trigger event thereby making processing 10% faster async.

Conversational AI for Secure Healthcare Assistance *March 2020 – May 2021*
Docker, Node.JS, MongoDB, RASA, Blockchain, MySQL, Python, Express.JS, jQuery, AJAX
- Architected **Docker-NodeJS-MongoDB**-based Software for tracking patients' electronic healthcare records.
- Spearheaded the development and integration of a cutting-edge **RASA**-powered therapy **Transformer** chatbot, utilizing the **BigchainDB** blockchain database for emotion analysis and secure medical record storage, optimized health monitoring, behavior analysis, and medical record privacy.

PUBLICATIONS

- Vedant S., et al. (2021) Leveraging Deep Learning and IoT for Monitoring COVID-19 Safety Guidelines Within College Campus. In: Garg D., Wong K., Sarangapani J., Gupta S.K. (eds) Advanced Computing. IACC 2020. Communications in Computer and Information Science, vol 1367. Springer, Singapore. https://doi.org/10.1007/978-981-16-0401-0_3