VEDANT SAHAI

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EXPERIENCE

JP Morgan Chase & Co.   Jun 2023 – Aug 2023
AI/ML Summer Associate   *Wilmington, DE*
- Conceptualized 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.
- Programmed a TabNet-based Deep Neural Network as a challenger for the TRS XGBoost model with 90% accuracy.
- Implemented a robust PyTest-based testing framework to validate the Transaction Risk Modeling Team's entire Feature Engineering codebase, ensuring 90% code coverage.

Plexflo   Oct 2021 – Jul 2022
AI Product Manager   *Mumbai, India*
- Engineered the development of EVidence, a Meter Data Management & Analytics (MDMS) software leveraging ITRON, Sensus Xylem, and Siemens meter data streams, powered by plug-and-play AI algorithms with a latency of less than 90ms.
- Delivered a non-invasive load monitoring (NILM) AI open-source library called Plexflo based on a Time-series Segmentation model with an F1 of 85%.
- Created a Rooftop Solar Assessment Flask API by employing Mask R-CNN Rooftop Segmentation and Geo-Spatial Image Processing techniques, ensuring SOC2 compliance.

Sync Energy Inc.   Jul 2020 – Sept 2021
AI Researcher Intern   *Mumbai, India*
- Developed and deployed AWS Lambda-Python-based Geo-Coordinates Power Outage REST API, optimizing the 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.

Mumbai International Airport Ltd.   Jun 2019 – Jul 2019
Software Development Intern   *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.

TECHNICAL SKILLS

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

EDUCATION

Pennsylvania State University   May 2024
Master of Science in Computer Science & Engineering (*GPA: 3.75 / 4.00)*   University Park, PA
- ***Teaching Assistant***: *CMPSC 132: Programming and Computation II: Data Structures & CMPSC 131*
- ***Relevant Coursework***: *Computer* Vision, Operating Systems, Algorithms, NLP, Deep Learning, Machine Learning, Computer Security

Fr. Conceicao Rodrigues College of Engineering   May 2021
Bachelor of Engineering in Computer Engineering (*CGPA: 9.58/10.0*)   Mumbai, India

PROJECTS

Datacertus   Mar 2022
Reacts.JS, AWS APIs, Python, Docker, AWS ELB, AWS Lambda, DynamoDB, Scikit, RASA, PyTorch, Keras
- Built a full-service, low code serverless React. JS-AWS-based Data Science platform to meet every B2B need.
- 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 data pipelines using Lambda – S3 – API Gateway-based trigger events making processing 10% faster async.

Conversational AI for Secure Healthcare Assistance   May 2021
Docker, Node.JS, MongoDB, RASA, Blockchain, Python, Express.JS, jQuery, AJAX, Vault, Nginx
- Architected Docker-NodeJS-MongoDB-Vault-based Software for tracking patients' electronic healthcare records, handling over 10,000 records concurrently.
- Developed and integrated RASA-powered therapy chatbot, utilizing the BigchainDB - IPFS blockchain database for behavior analysis and secure medical record storage, with an intent prediction confidence of 0.95.

PUBLICATIONS

- Vedant S., e Vedant S., Jason D., Mayank S., Mahendra M., Dhananjay K. (2021) Leveraging Deep Learning and IoT for Monitoring COVID19 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.