SAI SHRUTHI CHERUKURI

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Skills

- **Methodology:** SDLC, Agile, Waterfall
- **Programming Languages:** Java, Python, R, SQL, MATLAB, C++, Git
- **AI and Computer Vision:** General AI, Deep Learning, Neural Networks, Predictive Modeling, Anomaly Detection, Sentiment Analysis, Chatbot Development, Computer Vision, Image Segmentation, Object Detection, Face Recognition, Image Classification, Augmented Reality, TensorFlow, PyTorch, Computer Vision APIs (Google Vision API, AWS Rekognition), Depth Perception, Edge Detection
- **Development Tools:** Spring Boot, Spring MVC, Gradle, Jenkins, Helm, Docker, Kubernetes
- **Cloud Technologies:** AWS, Azure Services
- **Data Analysis Packages:** ggplot2, Pandas, NumPy, Scikit-Learn, PyTorch, TensorFlow, Keras, Spark, Matplotlib, SciPy
- **Databases:** MySQL, SQL Server, MongoDB, PostgreSQL
- **Machine Learning Techniques:** Regression (Linear, Polynomial), Random Forests, Association Rules, Support Vector Machines (SVM), Logistic Regression, k-Means Clustering and Classification, Deep Learning (Neural Networks including CNNs and RNNs), Natural Language Processing (NLP), Dimensionality Reduction (PCA), Ensemble Methods (Bagging and Boosting), Time Series Analysis
- **Other Tools:** Git, MS Office
- **Operating Systems:** Windows, Linux

Experience

Senior Systems Analyst **10/2024 to Current**

Travis County Juvenile Probation Department

- Applied Agile and SDLC software development processes to establish a robust data analysis methodology.
- Developed a MATLAB program to generate trajectory, velocity profiles, joint rates, and dexterity parameters for robotic applications.
- Utilized Pandas, NumPy, Seaborn, SciPy, Matplotlib, Scikit-learn, and NLTK in Python to develop various machine learning algorithms.
- Explored and analyzed diverse datasets using Matplotlib in Python and ggplot2 in R to derive actionable insights.
- Developed Flask RESTful APIs with SQLite and MySQL for seamless data integration and access.
- Employed machine learning algorithms such as linear regression, multivariate regression, Naive Bayes, Random Forests, SVM, k-Means, NLP, and KNN for predictive modeling and classification tasks.
- Researched reinforcement learning and control using TensorFlow and PyTorch, along with developing machine learning models using Scikit-learn.

Graduate Assistant (Data Analyst) **08/2022 to 05/2024**

University of North Texas

- Assisted in data collection, cleaning, and transformation using SQL and Python to support academic research and institutional reporting.
- Developed ETL workflows to process large datasets from multiple university systems, ensuring data accuracy and integrity.
- Conducted statistical analysis and data visualisation using tools like Tableau and Power BI to generate insights for faculty and administrative decisions.
- Utilised Python (Pandas, NumPy) and SQL to extract, transform, and analyse research datasets, improving data accessibility for academic studies.
- Implemented automated reporting solutions, reducing manual workload by 40% and improving efficiency in student performance tracking.
- Designed and maintained interactive dashboards for research projects, enhancing data-driven decision-making within academic departments.
- Collaborated with professors and researchers to apply machine learning techniques, such as regression models and clustering, to analyse complex datasets.

Audit and Assurance Analytics Senior Specialist **08/2020 to 08/2022**

Deloitte **India**

- Applied AI-driven predictive analytics to assess risk factors and identify potential fraud, enhancing compliance and reducing financial losses.
- Developed and maintained machine learning models to detect anomalies in audit and insurance claims, improving accuracy in risk assessment.
- Worked with cross-functional teams to implement data-driven solutions, optimizing audit processes and enhancing decision-making.
- Conducted comprehensive data analysis of policyholder and claim data using SQL, Python, and Power BI, uncovering patterns for proactive risk mitigation.
- Designed and maintained interactive dashboards in Tableau and Power BI to provide real-time insights into audit and insurance metrics.
- Led training sessions on AI, predictive analytics, and data visualization tools to enhance team capabilities in fraud detection and claims processing.
- Implemented AI-powered automation to streamline compliance checks, reducing manual workload and increasing efficiency.
- Utilized deep learning algorithms for customer segmentation, enabling personalized insurance offerings and targeted risk assessment.
- Developed statistical models to forecast trends in insurance claims, improving decision-making and cost management strategies.
- Designed ETL pipelines to clean, transform, and load structured and unstructured data, ensuring data integrity and accuracy.

Machine Learning Engineer **07/2019 to 07/2020**

HighRadius **India**

- Assisted in developing and testing machine learning models using Python libraries, including Pandas, NumPy, Scikit-Learn, and TensorFlow.
- Conducted data preprocessing, feature engineering, and exploratory data analysis to prepare datasets for model training.
- Supported the implementation of regression models, clustering algorithms, and classification techniques such as Random Forest, SVM, and Logistic Regression.
- Helped in writing and executing MySQL queries for data extraction and transformation, working with relational databases like MySQL and SQL Server.
- Assisted in training deep learning models using TensorFlow and PyTorch for small-scale projects.
- Gained experience in deploying ML models on cloud platforms (AWS, GCP) under supervision.
- Created data visualisations using Matplotlib and Seaborn to communicate findings effectively.

Certifications

- Introduction to Machine Learning, NPTEL, IIT KGP, 2018-10-01
- PCEP - Certified Entry - Level Python Programmer, Python Institute, 2024-06-01

Education

Master of Science: **Data Science** **05/2024**

University of North Texas USA

GPA: 3.75/4