Bhuvan Chennoju

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Summary

Data scientist with 4+ years of experience in machine learning, deep learning, data engineering, and analytics with expertise in cloud technologies. Proven track record of successful projects in ML development, publications in peer-reviewed journals, and effective communication with stakeholders at all levels.

Work Experience

Data Scientist | Stowers Institute for Medical Research August 2023 - Present

- Developed predictive models with convolutional neural network architecture to predict binding sites in DNA-protein interactions using Keras and TensorFlow, improving prediction accuracy by 15% in multi-task regression.
- Architected ML optimization techniques, including dilated convolutions, regularization, and cross-fold validation, improved the model generalization on test data performance by 10%.
- Engineered a Python-based ETL statistical pipeline for processing genomic text data at 1.5 GB per second to extract the contextual sequences continuous biosignals from raw data files.
- Experienced in analyzing analytical drivers from structured and unstructured datasets using Python(NumPy, SciPy, Matplotlib, Pandas, SQL, R, ggplot) and GPU clusters for scalability.

Data Science Consultant | University of Missouri-Kansas City September 2023 – February 2024

- Conducted 10+ interviews and requirements-gathering sessions with non-technical users to formulate the data workflow and data requirements to develop automated analytics dashboards for the financial health of grant-funded projects.
- Designed and implemented end-to-end Azure data pipelines to ETL operations, resulting in a 20% reduction in data processing time and a 15% increase in overall storage efficiency.
- With Azure Functions, Azure Databricks, and Azure Synapse Analytics, removed the bottlenecks in data processing workflows and reduced 10 man-hours in biweekly data reporting.
- Utilized DAX and M language in Power BI to create dynamic dashboards, integrating 7 divisions' financial data to bring tangible KPIs across the engineering school.
- Produced 5 through technical documentation and conducted 3+ hours of hands-on training sessions for end-users.

Data Scientist | Computational Intelligence & BI Laboratory October 2021 - July 2023

- Led end-to-end development of ML-based person identification and authentication framework, employing Agile methodologies for streamlined delivery of deployable software.
- Cleaned and analyzed complex biometric datasets, identifying key relationships and correlations between variables.
- Developed ResNet-based Human Authentication framework with AUC exceeding 85% and accuracy of 80%.
- Designed fNIRS-specific Human Identification framework with Azure AutoML, achieving an accuracy surpassing 87%.
- Successfully submitted and published peer-reviewed research papers on machine learning and deep learning.

Data Scientist Intern | T-Mobile USA Inc May 2022 – August 2022

- Built and deployed proof of concept image classifiers to compare 5G edge computing with traditional cloud, achieving a notable 13% reduction in inference time with edge computing.
- Utilized advanced deep learning techniques, including dilated connections, augmentations, and optimization, to enhance training performance by 18% accuracy for gesture recognition models for VR input devices.
- Created interactive data visualizations using Plotly, to deliver engaging and informative visuals.
- Presented data-driven outcomes to leadership, resulting in 25% savings in the quarterly budget for Edge compute R&D.

Publications

- **Analysis of fNIRS as a Biometric Modality,** Bhuvan et al., IEEE IJBC 2023.
  - Demonstrated the ability of fNIRS signals as biometrics with machine learning techniques.

- **A Wrist-worn Diffuse Optical Tomography Biometric System**, Sssrk et al., BIOSEG 2023.
  - Built deployable deep-learning models to identify and authenticate a person based on wrist vein patterns for a wearable standalone DOT device.

Education

MS in Computer Science (Thesis) - **University of Missouri - Kansas City, USA**
Bachelor of Technology - **National Institute of Technology, India**

Certifications

- Microsoft Certified Azure Data Scientist Associate - DP - 100 Exam
- Microsoft Certified Azure Data Engineer Associate - DP - 203 Exam

Skills Summary

Python ● R ● SQL ● NumPy ● Pandas ● SciPy ● Scikit-learn ● Matplotlib ● Plotly ● PyTorch ● TensorFlow ● Dash ● D3.js ● Tableau ● Power BI ● Azure ● PostgreSQL ● Git ● Excel ● MS SQL server ● Flask ● NoSQL ● HTML