AKHILA ATMAKURU

Researcher | Data Scientist | Scrum Master

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PROFILE SUMMARY

Experienced PhD Graduate and detail-oriented researcher with strong programming skills in creating and implementing predictive models to solve complex real-world challenges. Experienced in Market Research, Stakeholder Management, Leadership, Risk Management, and Financial Management. Acknowledged for adeptly overseeing and organizing research projects throughout a six-year tenure. l am currently in the final year of my PhD, specializing in Artificial Intelligence for Computational Neuroscience. My research focuses on developing explainable deep-learning models for predicting neurodegenerative diseases. I anticipate graduating in September 2024.

PUBLICATIONS

A. Atmakuru et al. "*Sensitivity Analysis for Feature Importance in Predicting Alzheimer's Disease*" ACAIN 2023, LNCS, Springer,2024

A. Atmakuru et al. "*Improved Filter-Based Feature Selection Using Correlation and Clustering Techniques*" LOD 2023, LNCS, Springer,2024.

Co-author. "*Classification-Biased Apparent Brain Age for the Prediction of Alzheimer's Disease*" Frontiers in Neuroscience, 2021.

TECHNICAL SKILLS

Certification:

- ✓ Professional Scrum Master -1 Certification from Scrum Organization (Scrum.org).
- ✓ Amazon Web Services Solution Architect.

Technical Skills:

- C, C++, R, and Python
- Keras, TensorFlow, PyTorch
- Scikit Learn, Pandas, NumPy & Matplotlib
- Data visualization - Tableau, PowerBI
- Computer Vision, Timeseries Analysis & NLP
- Confluence & Jira, Trello

AWARDS

- Recipient of the University of Reading Scholarship for the duration of the 3-year PhD program.
- Outstanding performance Award in Post-Graduation for achieving excellence at Cranfield University.
- "Star of the Team" Award for developing a scalable computer vision project "Intelligent Rail Monitor".

EDUCATION

Doctorate in Artificial Intelligence **Oct 2021 - Sep 2024**

University of Reading Reading, UK

Thesis Topic: Research is focused on advancing AI for Healthcare by addressing key challenges in predicting early Neuro-Degenerative Diseases (NDDs), improving the interpretability of Deep Learning models, and optimizing Multi-Task Learning (MTL). Two conference papers have been published on Feature Selection and Sensitivity Analysis, which leverage a diverse dataset of structural MRI scans encompassing six major NDDs as well as healthy subjects. Additionally, methods are currently being developed to predict the stages of NDDs. This research contributes to the development of AI methodologies for healthcare applications, with a particular emphasis on NDD prediction and model explainability.

Masters in Applied Artificial Intelligence — Sep 2020

Cranfield University — Cranfield, UK

Thesis Topic: Artificial Intelligence techniques suitable for UAV-based surveillance systems. The AI techniques have been developed for the identification of three species of sharks, tracking the shark movements, and classification of aggressive and non-aggressive sharks based on the pattern of their swimming movements. The AI software algorithms have been trained on a Medium-sized dataset created using videos available in the public domain. The dataset is subjected to suitable filtering and augmentation procedures to enhance the performance of subsequent processing steps. The results obtained from the algorithms show satisfactory results in classifying different species of sharks and tracking aggressive and non - aggressive behaviors.

EXPERIENCE

Department of Computer Science, UNIVERSITY OF READING: Oct 2020 - Sep 2021

Researcher & Teaching Fellow:

- Published novel methods for early prediction of Alzheimer's using Deep Learning models.
- Other Research Activities: Data Visualization, FreeSurfer for Pre-processing medical Image datasets.
- Courses Taught: Machine Learning, Deep Learning, Data Visualization, Operating Systems, and Python.

TATA CONSULTANCY SERVICES: Mar 2016 - Sep 2019

Scrum Master & Senior Data Scientist:

Central R&D Team, Chennai, India — **Nov 2018 - Sep 2019**

- Successfully developed models for computer vision, time series analysis, natural language processing, and recommendation systems.
- Led sprint planning, sprint reviews, sprint retrospectives, and daily scrums resulting in the successful delivery of major projects in the group.
- Worked closely with the Product Owner in managing customer expectations and backlog management.

Data Scientist:

Central R&D Team, Chennai, India — **Mar 2016 - Oct 2018**

- Developed and deployed predictive language models for chatbots tailored for Human Resources applications.
- Delivered Data visualization models using PowerBI/Tableau to clients for effective trend analysis.