

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. Skilled in developing predictive models using advanced AI techniques, including deep learning, machine learning, and computer vision, to address real-world challenges. Recognised for adeptly overseeing and organising research projects throughout a **five-year career**. My research focuses on developing explainable deep-learning models for the early prediction of Alzheimer's disease, specialising in **Artificial Intelligence for Computational Neuroscience**. I have submitted my thesis and am now awaiting my final examination.

PUBLICATIONS

A. Atmakuru et al., "[Transfer Learning for the Cognitive Staging Prediction in Alzheimer's Disease](#)" ACAIN 2024, LNCS, Springer, 2025

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 Organisation (Scrum.org).
- ✓ Amazon Web Services Solution Architect.

Technical Skills:

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

AWARDS

- Recipient of the University of Reading Studentship for the 3-year PhD program duration.
- "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

Doctor of Philosophy (Ph.D.) in Artificial Intelligence (AI)

Oct 2021-Mar 2025

University of Reading

Reading, UK

Developed state-of-the-art deep learning models to improve accuracy and explainability in AD prediction using MRI data. Designed innovative feature selection techniques that surpassed industry standards, enhancing model generalisability. Introduced a novel ensemble sensitivity analysis to identify key features (SHAP + Sobol) that enhance interpretability, aligning AI insights with medical expertise findings. Developed a multi-stage algorithm leveraging transfer learning and autoencoders, achieving 73.26% accuracy, outperforming previous benchmarks while optimising data efficiency. This research pushes the boundaries of AI in medical imaging, making deep learning models more transparent, reliable, and clinically applicable. This research led to multiple publications in Springer and Frontiers in Neuroscience.

Masters in Applied Artificial Intelligence

Oct 2019-Sept 2020

Cranfield University

Cranfield, UK

Thesis Project (THHINK WIRELESS TECHNOLOGIES): AI-driven UAV surveillance uses deep learning to identify shark species and classify behaviour as aggressive or non-aggressive based on swimming patterns. Trained on a large video dataset with preprocessing and augmentation, the models achieved high accuracy, highlighting AI's potential for real-time shark monitoring.

EXPERIENCE

Department of Computer Science, UNIVERSITY OF READING:

Oct 2020-Sept 2021

Researcher & Teaching Fellow:

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

TATA CONSULTANCY SERVICES:

Mar 2016 - Sep 2019

Scrum Master & Senior Data Scientist:

Central R&D Team, Chennai, India

Nov 2018-Sept 2019

- Developed and deployed models for computer vision, time series analysis, NLP, and recommendation systems on the AWS cloud platform, leveraging services like SageMaker, EC2, Lambda, and S3 for scalable and efficient implementation.
- 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 to manage customer expectations and backlog.

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 visualisation reports using PowerBI/Tableau to clients for effective trend analysis.