AKHILA ATMAKURU **London, UK**
Researcher | Scrum Master **+44-(0)7918358129**

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EDUCATION

Doctor of Philosophy (Ph.D.) in Artificial Intelligence (AI) **Oct 2021 - Sept 2025**
University of Reading **Reading, UK**

- **Designed two novel feature selection techniques** that significantly improved model generalisability and outperformed existing benchmarks, enabling more reliable deployment of AI in critical applications.
- **Developed a novel ensemble sensitivity analysis framework** that advanced explainability in deep neural networks, fostering transparent AI systems aligned with domain-specific requirements in high-stakes decision-making contexts.
- **Designed a novel multi-stage algorithm integrating transfer learning with autoencoders**, achieving state-of-the-art classification accuracy and improved data efficiency, particularly valuable for domains with limited and sensitive datasets.

Masters in Applied Artificial Intelligence **Oct 2019 - Sept 2020**
Cranfield University **Cranfield, UK**

Thesis Project (THHINK WIRELESS TECHNOLOGIES):

- **Designed and developed** an AI-driven UAV surveillance project to identify shark species and classify behaviour (aggressive vs non-aggressive) using deep learning techniques.
- **Developed and trained deep learning models on a large-scale video dataset**, incorporating preprocessing and data augmentation for enhanced performance.
- Achieved high classification accuracy, **demonstrating the potential of real-time AI solutions** in marine wildlife monitoring and safety applications.

EXPERIENCE

UNIVERSITY OF READING, Department of Computer Science: **Oct 2020 - Sept 2021**
Teaching Fellow & Researcher: **Reading, UK**

- **Courses Taught:** Machine Learning, Deep Learning, Data Visualisation, Operating Systems, and Python.
- Published novel methods for deep learning models.
- **Other Research Activities:** Data preprocessing, data visualisation, FreeSurfer for Pre-processing image datasets

TATA CONSULTANCY SERVICES: **Mar 2016 - Oct 2019**
Machine Learning Engineer: **Chennai, India**
Central R&D Team, **Jul 2018 - Dec 2019**

- **Designed and deployed advanced DL models** (CNNs, transformer-based LLMs) and built scalable ML pipelines, improving automation, classification accuracy, and reducing time-to-delivery by 40%.
- Leveraged **AWS cloud services** (SageMaker, EC2, Lambda, S3) for scalable training and deployment, ensuring cost efficiency and high availability of production ML solutions.
- **Led an agile ML/AI team**, mentoring engineers, managing sprints, and aligning stakeholders through proof-of-concepts and demos to deliver business-focused AI initiatives.

Data Scientist: **Chennai, India**

Central R&D Team, **Mar 2016 - Jul 2017**

- **Developed end-to-end predictive models on large-scale tabular datasets**, applying advanced data cleaning, feature engineering, and analysis to improve forecasting accuracy and business decision-making.
- **Built interactive dashboards and reports** (Tableau / Power BI) adopted by senior leadership, while partnering with stakeholders to translate business needs into ML solutions and drive adoption through impactful demos.

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.

AWARDS

- **Awarded a fully funded PhD Studentship by the University of Reading** in recognition of academic excellence and research potential.
- "**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."

TECHNICAL SKILLS

Certification:

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

Programming: Python, C, C++, R - proficient in ML/DL algorithm design and performance optimisation.

ML/DL: TensorFlow, Keras, PyTorch, Scikit-Learn - hands-on experience designing, training, and deploying models.

AI Applications: Computer Vision, Natural Language Processing, Time Series, Predictive Modelling and Anomaly Detection.

Data Analysis & Manipulation: Pandas, NumPy, Matplotlib, Seaborn – advanced feature engineering, preprocessing, and exploratory data analysis for large-scale datasets.

Cloud / MLOps: AWS - SageMaker, EC2, Lambda, S3 - scalable model deployment, training pipelines, and production-ready solutions.

Data Visualisation & BI Tools: Tableau, Power BI – building dashboards and reports adopted by stakeholders for strategic decision-making.

Project Management & Collaboration: Jira, Trello, Confluence – Agile/Scrum project management, sprint planning, and team coordination.