# Ashkan Lotfipoor, PhD

alotfipoor.com | Google Scholar
*ILR. No sponsorship required.*

Email: a.lotfipoor@gmail.com
Mobile: 07493 920324
Address: Woking, England


## Summary


AI Engineer who ships. Fine-tuned and deployed domain-specific LLMs, built the retrieval and agent pipelines around them, and shipped the full-stack products that carry them to users, including a live iOS app and an AI research platform now in early access. PhD in deep learning for time-series forecasting; four peer-reviewed papers, 169 citations. Google Cloud, Railway, Docker.


## Experience

**Zynthia (zynthia.ai)** **Apr 2026 – Present**
*Founder & Engineer* *Remote*

- Building an AI platform for systematic literature reviews: continuous database monitoring, LLM-assisted abstract screening with human-in-the-loop decisions, and one-click PRISMA documentation generation.
- Designed the screening pipeline so every AI suggestion is logged and reversible, producing a complete audit trail. This is the compliance requirement that blocks most AI tools from academic use.
- Shipped the full stack solo: Next.js front end, retrieval and screening backend, and long-form technical guides driving organic acquisition.
- 150+ researchers on the early-access waitlist ahead of the October 2026 launch.

**Cycle Confident & University of Surrey (KTP Project)** **Feb 2024 – Present**
*AI/ML Engineer, KTP Associate* *London, UK*

- Fine-tuned and deployed `deepseek-llm-7b-chat` over a domain corpus of 2M+ documents, improving query accuracy 40% against a general-purpose baseline.
- Built full-stack analytics platform (React, Django, PostgreSQL) serving 50+ internal users and 200+ external clients, reducing data retrieval time by 65%.
- Architected ETL pipelines processing 500K+ daily records on Docker and Railway, cutting infrastructure costs by 30%.
- Led UI/UX redesign lifting client engagement 45%; platform supported 8+ follow-up contracts.
- Published the underlying LLM research in the *Journal of Computer Information Systems* (2026).

**Radzi (radzi.com)** **Oct 2025 – Present**
*Freelance Mobile Developer* *Remote*

- Shipped an active travel app in React Native and Expo to the iOS App Store, from design through App Review to release.
- Built GPS route tracking, group goals and leaderboards, and a street-level feedback layer that supplies local councils with walking and cycling infrastructure data.

**Heriot-Watt University** **Sep 2021 – Feb 2023**
*Research Assistant* *Edinburgh, UK*

- Developed riverflow forecasting model using Gradient Boosting Regression, improving prediction accuracy by 25% over baseline methods.
- Processed sensor datasets covering 10K+ UK homes for PropEco energy efficiency analysis.

**Siemens AG (Research Project)** **May 2022 – Nov 2022**
*Researcher (Part-time)* *London, UK*

- Engineered CNN-based fault detection for high-speed train bearings, achieving 92% classification accuracy on unlabelled acoustic data; published in *Sensors*.
- Optimised signal pre-processing with FFT and wavelet transforms, reducing false positives by 18%.

**Samsung** **Jun 2017 – Sep 2019**
*Senior Data Analyst* *Tehran, Iran*

- Automated reporting with Power BI dashboards tracking 50+ KPIs, reducing manual analysis time by 40%.

## Selected Publications

*217 citations, h-index 5. Google Scholar*

**Lotfipoor, A.**, Fakhimi, M., Hagen-Zanker, A., & Showell, D. (2026). Large Language Models to Analyze Business Intelligence User Narratives. *Journal of Computer Information Systems*.

**Lotfipoor, A.**, Patidar, S., & Jenkins, D. P. (2024). Deep neural network with empirical mode decomposition and Bayesian optimisation for residential load forecasting. *Expert Systems with Applications*, 237, 121355. **[81 citations]**

**Lotfipoor, A.**, Patidar, S., & Jenkins, D. P. (2023). Transformer network for data imputation in electricity demand data. *Energy and Buildings*, 300, 113675. **[30 citations]**

Dong, K., & **Lotfipoor, A.** (2023). Intelligent bearing fault diagnosis based on feature fusion of one-dimensional dilated CNN and multi-domain signal processing. *Sensors*, 23(12), 5607. **[36 citations]**

Patidar, S., Jenkins, D. P., Peacock, A., & **Lotfipoor, A.** (2022). Missing data imputation for community energy demand modelling. *3rd IBPSA-Scotland Conference (uSIM 2022).*

**Lotfipoor, A.**, Patidar, S., & Jenkins, D. P. (2020). Short-term forecasting of residential electricity demand using CNN-LSTM. *2nd IBPSA-Scotland Conference (uSIM 2020).* **[10 citations]**

## Technical Skills

**AI & LLMs:** Fine-tuning (LoRA), RAG, evaluation design, LangChain, LangGraph, LlamaIndex, Ollama
**Machine Learning:** PyTorch, Transformers, CNNs, Time Series, NLP, MLOps
**Full-Stack:** React, React Native, Next.js, Expo, Tailwind CSS, Node.js, Django, REST APIs
**Programming:** Python, JavaScript, SQL, Bash
**Databases:** PostgreSQL, MySQL, Firebase
**DevOps & Cloud:** Docker, CI/CD, Google Cloud, Railway
**Data Visualisation:** Power BI, Tableau, Plotly, D3.js

## Education

**Heriot-Watt University** **Oct 2019 – Mar 2024**
*PhD, Energy, Geoscience, Infrastructure & Society (James Watt Scholarship)* *Edinburgh, UK*

- Thesis: *Enhancing Energy Demand Forecasting and Data Imputation Using Deep Learning: An Integrated Approach*. Built a Transformer plus K-means imputation model and a CNN-LSTM forecasting framework with Bayesian optimisation, feature decomposition, and percentile-based bias correction. Supervisors: Dr Sandhya Patidar, Prof. David P. Jenkins.

**University of Tehran** **Oct 2015 – Oct 2018**
*MSc in Engineering Geology (With Distinction)* *Tehran, Iran*

**University of Tehran** **Mar 2011 – Oct 2015**
*BSc in Geology* *Tehran, Iran*