

# Akhileshwar Sanathana

AI Engineer | Generative AI, RAG & Software Craftsmanship  
Manchester, United Kingdom | [07554462431](tel:07554462431) | [akhileshwar008@gmail.com](mailto:akhileshwar008@gmail.com) | [LinkedIn](#) | [Github](#)

Summary
Passionate AI Engineer with a strong foundation in Generative AI, RAG architectures, and Agentic frameworks. Committed to Software Craftsmanship principles, utilizing Agile methodologies and TDD to build robust, production-ready AI solutions. Experienced in Python, Cloud (Azure/AWS), and modern AI-assisted development tools (Cursor, Copilot). Eager to join Codurance to solve real-world client problems and contribute to the firm's growing AI capabilities through experimentation and knowledge sharing.

Experience
<div><div><b>BGC - Cantor Fitzgerald</b></div><div>Software Engineer (Automation &amp; Cloud)</div></div> <div><b>January 2024 - July 2024</b> London, United Kingdom</div> <ul style="list-style-type: none"><li>Legacy System Evolution: Refactored and optimized legacy automation scripts using Python and Azure, aligning with modern engineering standards to improve system reliability and maintainability.</li><li>Agile Delivery: Worked within an Agile environment to deliver automation solutions that streamlined business operations, demonstrating a focus on client value and iterative development.</li><li>Knowledge Sharing: Documented technical workflows and APIs, facilitating knowledge transfer within the team and improving onboarding efficiency.</li></ul>

<div><div><b>PeopleLink</b></div><div>Data Mining Intern</div></div> <div><b>June 2022 - July 2022</b> Hyderabad, India</div> <ul style="list-style-type: none"><li>Data Solutions: Built data extraction and processing pipelines to solve specific client marketing challenges, ensuring data quality for downstream analysis.</li><li>Experimentation: Rapidly prototyped data mining algorithms to assess practical applications for campaign optimization.</li></ul>
---

Education
<div><div><b>University of Southampton</b></div><div>Artificial Intelligence Merit</div></div> <div><b>September 2024 - September 2025</b> Master's Degree</div> <ul style="list-style-type: none"><li>Dissertation (AI Evaluation &amp; Observability): Developed a framework for evaluating model reliability using Conformal Prediction. Focused on uncertainty quantification in noisy data environments, directly addressing the need for robust evaluation strategies in AI systems.</li></ul>

<div><div><b>ICFAI Tech University</b></div><div>Computer Science and Engineering Distinction</div></div> <div><b>July 2020 - July 2024</b> Bachelor's Degree</div>
---

Projects
<div><div><b>Agentic RAG Knowledge System</b></div><ul style="list-style-type: none"><li>RAG Architecture: Built a production-ready RAG system using LangChain and Vector Databases, implementing a dual-layer Redis semantic cache to optimize retrieval latency.</li><li>Agentic Workflows: Designed agentic reasoning loops to handle complex user queries, utilizing Prompt Engineering techniques to ensure deterministic and safe outputs.</li><li>AI-Assisted Development: Leveraged GitHub Copilot and Cursor during development to accelerate coding velocity, demonstrating proficiency with modern AI developer tools.</li></ul></div>

LangChain, Vector Databases, Redis, GitHub Copilot

<div><div><b>Production-Grade Vision Pipeline</b></div><ul style="list-style-type: none"><li>Evaluation &amp; Observability: Implemented rigorous evaluation pipelines for a ResNet-50 model (Medical Imaging), utilizing data augmentation and transfer learning to ensure robustness in production scenarios.</li><li>Engineering Best Practices: Structured the project with modular code and reproducible training scripts, adhering to software craftsmanship principles.</li></ul></div>
--

Model Evaluation, Python, Computer Vision, Clean Code

<div><div><b>Audio Classification System</b></div><ul style="list-style-type: none"><li>Experimentation: Benchmarked multiple deep learning architectures (CNNs vs LSTMs) to assess practical application value for audio signal processing tasks.</li></ul></div>
--

PyTorch, Experimentation, Signal Processing

Volunteering
<div><div><b>Enactus UK &amp; Ireland</b></div><div>Member</div></div> <div><b>2024 - Present</b></div> <p>Engaged in community-driven projects, practicing public speaking and presenting solutions to diverse stakeholders.</p>

Skills
<div><div><b>GenAI &amp; Agentic Frameworks</b></div><div>LangChain, CrewAI Concepts, RAG Architectures, Vector Databases, Prompt Engineering, LLM Evaluation</div></div> <div><div><b>Software Craftsmanship</b></div><div>Agile Methodologies, Clean Code, CI/CD Principles, Version Control (Git), AI-Assisted Tools (Cursor, Copilot)</div></div> <div><div><b>Cloud &amp; Core Tech</b></div><div>Python, Azure, AWS, SQL, Redis</div></div> <div><div><b>Knowledge Sharing</b></div><div>Technical Documentation, Mentoring, Public Speaking, Client Delivery</div></div>

Certifications
<div><div><b>Amazon Web Services (AWS) Certification</b></div><div>Amazon Web Services</div></div> <div><b>August 2022</b></div>
<div><div><b>Google AI Essentials Certification</b></div><div>Google <a href="https://www.coursera.org/account/accomplishments/verify/HJV7ITUANWYO">https://www.coursera.org/account/accomplishments/verify/HJV7ITUANWYO</a></div></div> <div><b>August 2025</b></div>
<div><div><b>Artificial Intelligence Fundamentals</b></div><div>IBM <a href="https://www.credly.com/badges/9e6f3425-0797-41f6-ae60-baccad2fdef4/linked_in_profile">https://www.credly.com/badges/9e6f3425-0797-41f6-ae60-baccad2fdef4/linked_in_profile</a></div></div> <div><b>October 2025</b></div>

Publications
<div><div><b>Metaverse and Blockchain Use Cases and Applications</b></div><div>Taylor and Francis Group <a href="https://doi.org/10.1201/9781003559269">https://doi.org/10.1201/9781003559269</a></div></div> <div><b>12 August 2025</b></div> <p>Authored a technical chapter on secure digital ecosystems, demonstrating capability in technical writing and knowledge sharing.</p>