

# Avishek Rauniyar

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## Education

**B.Tech in Computer Science Engineering (AI & ML)**

2022 – 2026

Amrita Vishwa Vidyapeetham – Amritapuri, India

CGPA: 9.18/10

## Experience

**Elite AI Research Assistant**

Dec 2025 – Present

*Amrita School of AI, Faridabad*

- Built and evaluated Retrieval-Augmented Generation (RAG) systems for educational AI applications; contributed to research on LLMs, knowledge retrieval, and response quality optimization
- Developed agentic AI workflows leveraging LLMs, external tools,
- Collaborated on solution design, technical planning, and research initiatives; actively participated in workshops on generative AI, LLMs, and autonomous agent frameworks
- Conducted workflow testing and demo evaluations for educational applications, analyzing performance and user feedback to support iterative development

**Research Associate – Medical AI**

Apr 2025 – Present

*Harvard Medical School & Dana-Farber Cancer Institute*

Remote

- Designed and deployed scalable data pipelines integrating clinical data streams with AI inference services via REST APIs
- Built interpretable diagnostic tools supporting real-time clinical deployment, coordinating across cross-functional research teams
- Authored technical documentation and system architecture guides for reproducibility and stakeholder onboarding

**QA Engineer Intern**

Feb 2025 – Aug 2025

*Heapvue*

Remote

- Built automated test scripts with Selenium (Python), improving testing efficiency by 40%; performed API testing with Postman across microservices
- Collaborated in an agile remote environment with cross-functional teams, ensuring quality across multiple platform releases

**AI Research Intern- ACM Student Chapter, Amritapuri**

Jan 2024 – Jun 2024

*Amrita Vishwa Vidyapeetham* Researched prostate cancer grading systems; contributed to publication in *Procedia Computer Science*

## Projects

**CogniMail AI – Intelligent Email Automation**

- AI-powered inbox dashboard integrating with email services (Gmail/Mailchimp patterns) to automate triage, management workflows, and API orchestration

**Omkara Extractor – End-to-End Document Processing Pipeline**

- Full ETL pipeline (Streamlit + PaddleOCR + LayoutParser) with structured Excel export; showcases third-party tool integration and scalable data workflow design

**Movie Recommendation Engine – GraphRAG & Neo4j**

- Integrated Neo4j graph databases with GraphRAG logic via API-driven workflows for high-accuracy cross-platform content retrieval

**SageLoRa – LLM Quantization & Cloud Deployment**

- Lightweight document-aware chatbot on a 4-bit quantized DeepSeek-LLM-7B model; demonstrates production-ready deployment under strict memory constraints

## Technical Skills

**Languages:** Python, Go, Java, SQL, C

**GenAI:** RAG, Agentic AI, LLM Applications

**Backend & Data:** FastAPI, REST APIs, ETL Pipelines, Neo4j

**Cloud & Tools:** Docker, Git, Linux, Azure, Postman

## Publications & Achievements

- **Stratifying Prostate Cancer:** Published in *Procedia Computer Science*, Vol. 259 (Jan 2025) – CNN-based cancer staging pipeline.
- **Algorithmic-Symphony:** Published in *Springer* (2024), benchmarking SVM, KNN, Random Forests across diverse datasets.
- **NASA Space Apps Challenge:** Won Local Impact Award (Oct 2024) for innovative solutions in exoplanet exploration.
- **India AI Impact Summit 2026:** Presented *Medsum* and competed in the AI Impact Buildathon (Feb 2026).