# Eshanika Ray

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## Education

**UCLA Samueli School of Engineering | MS in Computer Science** — Los Angeles, California
GPA- 3.81/4.0 | Google Deepmind Fellowship Recipient — Expected, 2026

**SRM Institute of Science and Technology | B.Tech in Computer Science and Engineering** — Chennai, India
GPA- 9.28/10 — 2023

## Technical Skills

Python | C++ | JavaScript | HTML | CSS | HTTP | REST APIs | Client-side Web Technologies | Debugging & Troubleshooting | Large Language Models (LLMs) | Prompt Engineering | Retrieval & Agent Tooling | Transformers (HuggingFace) | Model Evaluation & Deployment | Responsible AI & Hallucination Reduction | Data Structures & Algorithms | Web Application Development (Django, React-basic) | Unity (XR Prototyping) | Data Engineering | ETL Pipelines | Apache Spark | Databricks | A/B Testing & Experimentation | Product Analytics & Developer Feedback Systems | Dashboarding & Insights (Tableau, Power BI) | SQL | AWS (EC2, S3) | Cloud Services | Git | Docker | Kubernetes | Linux | Visualization & Reporting | Accessibility-Aware UI Design | Privacy & Trust-Focused AI Workflows

**Relevant Coursework:** Natural Language Processing, AI for Climate Change, Learning & Reasoning with Bayesian Networks, Human Factors in AI, Deformable Models, AI Agents & Foundation Models, Advanced Neural Networks & Deep Learning, Big Data Essentials, Data Science, Artificial Intelligence, Computer Network, Database Management

## Awards

**Google DeepMind Fellowship**, University of California, Los Angeles (2024) **| Dean's Merit Scholarship** – Ranked 1st in Computer Science Department at SRM Institute of Science and Technology (2021) **| Google Data Analytics Professional Certification**(2023)

## Experience

**RFA Electric (RFxAI Startup)** — **Los Angeles, California**
***AI/ ML Intern*** — ***June 2025- Present***
- Leading product and technical strategy for an AI-assisted analog design platform, evaluating RL, GNNs, and Graph Transformers to shape a scalable automation roadmap,and built an RF engineering copilot with retrieval + tool-calling agents, reliability safeguards, and developer-feedback loops to improve accuracy, trust, and adoption.

**Arac Lab, UCLA Health** — **Los Angeles, California**
***Lead Product Developer*** — ***June 2025- Sept 2025***
- Solely developing a mixed reality rehab system in Unity (Meta Quest 3) to simulate 3+ neuro-rehab experiments used for tracking upper-limb recovery in stroke patients at UCLA Health, integrating Meta XR SDK for spatial interaction and joint-movement capture

**Optum, UnitedHealth** — **Gurgaon, India**
***TDP-II, Data Science and Engineering*** — ***Sept 2023-Aug 2024***
- Coordinated 3 projects, streamlined data processes and collaborated with teams to drive actionable business decisions through automation and visualizations
- Created an interactive dashboard by extracting and analyzing employee timesheet data, saving $2M through improved time tracking
- Made a financial dashboard for Capital and Operations data, enabling real-time budget forecasts and financial insights for stakeholders, optimising 13% costs by 4th quarter

**Optum, UnitedHealth** — **Gurgaon, India**
***Summer Intern*** — ***June 2022-Aug 2022***
- Developed a Django-based mental healthcare application in 4 weeks, allowing patients to find and book nearby doctor appointments
- Integrated a chat platform for online support groups, facilitating communication between thousands of in network patients and families
- Refined ServiceNow workflows, resolving 20+ issues and improving platform efficiency

**Hewlett-Packard Enterprise** — **Kolkata, India**
***IT Project Management Intern*** — ***July 2021-Oct 2021***
- Designed the data model for the West Bengal Crime and Criminal Tracking System, processing thousands of data points to make visualizations for crime hotspots
- Migrated physical data to the AWS cloud, ensuring enhanced scalability and accessibility

**Quartic.ai** — **Bangalore(Remote), India**
***Data Engineering Intern*** — ***Aug 2021 -Oct 2021***
- Executed comparative analysis on 5+ GPU libraries and algorithms such as Cugraphs, Numba, Yahookit, Nvidia to transition code from CPU-based to GPU-based architecture
- Optimized workflows, converting 15% of the code for revised performance and time efficiency

## Research Projects

- **Hepnovate:** Initiated collaboration with clinicians and led iterative product development; deployed a multimodal AI assistant (speech-to-text, lab parsing, imaging, LLMs) and conducted structured feedback/testing sessions with **10+ physicians**, improving diagnostic trust through confidence scores, citations, and UX refinements. Conducted a clinical survey where 70% of doctors reported increased trust in AI-assisted diagnosis after using the tool

- **Med-Tech Wearable + Platform:** Designed and built a full-stack medical sensing system end-to-end firmware for physiological data capture, BLE streaming, and a web-based monitoring dashboard. Conducted user research and competitive analysis to validate need, defined roadmap, and independently executed prototype testing with real users.

- **Interpretability Dashboard for LLMs:** Built a unified interpretability interface that exposes attribution maps, activation pathways, and token-level reasoning traces. Introduced an explanatory-virtue assessment module and optimized the UX via iterative researcher evaluations.

- **Web Information Retrieval using Vector Space Model and Docu-Tally Metric:** Co-authored an IEEE-published paper proposing a hybrid information retrieval method combining TF-IDF with a novel Docu-Tally metric to revise search ranking relevance. Evaluated vector space–based document similarity on large web datasets

- **OT-Based Retrieval Pipeline for Imitation Learning:** Introduced an OT-based retrieval objective that reduces cost by 94%, stabilizes matches (4× lower variance), and retrieves richer skill executions (+90.5 frames), outperforming SDTW on 94.9% of queries.