Utkarsh Patel

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Bangalore, India

EDUCATION

Ramaiah Institute of Technology   Bangalore, India
B.E. Computer Science   Oct. 2023 – July 2027

RESEARCH & PUBLICATIONS

Paper Published (ICDDS '25): "Explainable Convolutional Network for Clinically Confusable Lung Diseases" (IIIT Dharwad).

Paper Presented (ISAI-DT '24): Research on automated information extraction from legal texts.

PROJECTS

PeerNexus (Torrent Client) | *Java, Networking* | GitHub
- Engineered a BitTorrent-style peer-to-peer torrent client with custom protocol handling, achieving stable file transfers.
- Orchestrated multithreaded socket-based peer communication, piece exchange, and file reassembly.
- Formulated tracker interaction, bitfield exchange, choking/unchoking logic, and integrity-verified piece scheduling.

HALEM-PEGASIS Evaluator | *Java, Swing, Maven* | GitHub
- Proposed and implemented HALEM-PEGASIS, a novel hierarchical extension of PEGASIS for WSN routing.
- Designed a simulator to compare network lifetime and energy efficiency against baseline PEGASIS using adaptive leader rotation.

Toxic Comment Detection | *Python, Flask, Scikit-Learn* | GitHub
- Constructed an end-to-end toxic comment classification system using TF-IDF, SVM, Logistic Regression, and XGBoost.
- Deployed a Flask dashboard for interactive testing and applied ensemble methods to maximize prediction accuracy.

Lumen (Course Selling Website) | *Node.js, Express, MongoDB* | GitHub
- Architected a full-stack platform for browsing and purchasing courses, supporting 100+ concurrent user sessions.
- Integrated secure authentication, instructor dashboards, and optimized database schemas for faster retrieval.

EXPERIENCE

IEEE Computer Society, RIT Chapter   Bangalore, India
Chair   Dec. 2025 – Present
- Spearheading student engagement initiatives, resulting in a **30% increase** in active chapter membership.
- Coordinating **20+ large-scale technical events**, including coding competitions and workshops with **1750+ participants**.
- Managing a core team of **48 members** to execute event logistics, budgeting, and marketing strategies.

IEEE Computer Society Bangalore Chapter   Bangalore, India
Intern (IAMPro '25)   Apr. 2025 – Sept. 2025
- Selected for IAMPro '25 (**top 5% of applicants**), a rigorous 6-month industry-oriented mentorship program.
- Collaborated with cross-chapter teams to execute technical initiatives, enhancing community outreach across **3 colleges**.
- Co-authored and released a research paper on "Explainable Convolutional Networks" at the ICDDS '25 conference.

TECHNICAL SKILLS

Languages: Java, Python, JavaScript
Web Dev: React.js, Angular, Node.js, Express.js, HTML, CSS, MongoDB
CS Fundamentals: DSA, OOP, Algorithms
Tools: Git, GitHub, Maven, N8N