SURYAPRASANTH T

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Education

BTech Information Technology   **2025 – Present**
St. Joseph's College of Engineering, Chennai   *CGPA 8.24*

Experience

Intellect Design Arena   **Jun 2025 – Jul 2025**
Software & AI Developer Intern   *Chennai*

- Developed a secure Medical Reimbursement Claim Portal using **FOSS tools** including **React.js**, **Node.js (Express)**, and **PostgreSQL**, enabling employees to submit, track, and manage medical claims efficiently.
- Implemented **open-source libraries** like **SheetJS** for Excel-like data tables and **Socket.IO** for real-time internal communication (chat with text/voice support).
- Designed a **nested document management system** with folder/subfolder creation, preview, and upload features using community-driven file system tools.
- Proficient in **WebSocket's, JWT Auth, REST APIs**, and **Linux-based deployment**.

Projects

ARIS for Research Scholars | Python, Flask, AI/ML, FOSS, Hugging Face, OpenCV   *Git*   **Jan 2025**

- ARIS – an open-source AI-powered research assistant designed to streamline academic workflows for students and scholars.
- Engineered a custom LLM pipeline to extract citations, contextualize research papers, and simplify scientific language for broader accessibility.
- Enhanced efficiency by 25% through fine-tuning an in-house open-source large language model for classification and language understanding.
- Promoted FOSS adoption by leveraging open-source ML frameworks (e.g., Hugging Face Transformers).

CELLINTEL | Electron.js, Python, Flask, D3.js, PostgreSQL, FOSS   *Git*   **Feb 2025**

- CELLINTEL – a law enforcement-grade telecom data analysis tool featuring interactive network visualizations, OSINT integration, and real-time link analysis.
- Built a responsive, desktop-ready UI using Electron.js and Flask, enabling multi-format data ingestion and cross-source correlation.
- Leveraged FOSS tools such as Maltego CE, SpiderFoot, and OpenCelliD APIs to expand OSINT capabilities.

Achievements

1. **HACK-A-BOT 2024** - 1st Place.
2. **Cyberthon 2025** - Won Group Special Mention.
3. **Hack India Spark 1** - Competed among 200+ national teams (Singularity NET & Sharp).
4. **Best UG Paper** - IMSTEM 2025 International Conference.

Technical Skills

- Programming Languages: Java, Python, C++, JavaScript
- Web Technologies: HTML, CSS
- Databases: MySQL, MongoDB
- Version Control: Git & GitHub
- Operating Systems: Unix/Linux, Ubuntu
- Tools & Frameworks: Apache, Docker, Maltego
- Cloud Services: Amazon Web Services (AWS)
- Scripting: Bash Script

Research Paper

Published Paper | link   April 2025

• Swarm Intelligence for Dynamic and Multi-Scale Toxicity Prediction in Drug Discovery

• Co-authored a novel Swarm-Based Toxicity Prediction (SBTP) Model integrating Graph Neural Networks, Multi-Agent Reinforcement Learning, and stigmergy-based learning to predict drug-induced toxicity. Demonstrated a 12.7% increase in prediction accuracy and 18.4% reduction in false positives compared to traditional QSAR models, enabling dynamic, interpretable, and biologically aligned AI toxicology insights.