

# Surya Dev Singh

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## PROFILE

Software Development Engineer | Machine Learning Developer with 1+ year of hands-on experience building scalable AI-powered applications and optimization systems. Specialized in full-stack development, optimization algorithms, and generative AI systems.

## EXPERIENCE

ThoughtClan Technologies Pvt Ltd

Bangalore, India

### Software Engineer

- Led POC implementation of DeepEval evaluation framework with teammate, covering complete feature set. Delivered technical presentations enabling 4+ teams to integrate DeepEval, reducing manual evaluation time by 60%.

#### ● **Vedanta – Document Comparison Automation**

- Architected and deployed automated pipeline comparing client/shipliner documents using Azure Vision AI OCR and LLM-based differential analysis.
- Developed end-to-end text extraction and field-level comparison system using advanced prompt engineering, generating annotated PDFs with review annotations.
- Enhanced system performance in Phase 2 by implementing frontend interface and Jinja templating for dynamic prompt generation, improving code modularity by 40% and maintainability.

#### ● **Yokogawa - Energy Dispatch Optimization (POC)**

- Built an optimization model using the PuLP linear programming library to maximize profit by analyzing 24-hour grid pricing patterns and scheduling optimal battery storage dispatch
- Simulated over 100 hourly pricing scenarios and visualized cost-saving opportunities with Pandas and Matplotlib, identifying 15–20% potential efficiency gains
- Provided actionable insights for peak/off-peak energy dispatch, supporting smarter and data-driven grid operations

Samsung R&D Institute India (PRISM Program)

Remote(India)

### Research Intern

May 2023 – Dec 2023

- Developed a Django web app to automate consolidation of productivity data from 3 Excel files, handling 500+ user records using Pandas and OpenPyXL.
- Built logic to merge entries, remove duplicates, sum category-wise productivity, and sort users by name, reducing manual effort by 70%.
- Added functionality to compare against a reference user list and highlight mismatches, making it easier to validate data and spot missing entries.

## TECHNICAL SKILLS

**Languages:** Python, Java, C++, GoLang, SQL, JavaScript.

**ML/AI:** Machine Learning, RAG Systems, LangChain, LangGraph, Deep Learning, Model Evaluation.

**Cloud & Tools:** Docker, Azure Vision, Git, MySQL, PostgreSQL, PostGIS, QGIS, RESTful APIs, Retool AI, CI/CD.

**Frameworks:** Django, FastAPI, Pandas, NumPy, Matplotlib, PuLP, Scikit-learn.

## CERTIFICATIONS

- Microsoft Azure fundamentals - Jan 2023 ([link](#))
- Microsoft Azure AI fundamentals - Jan 2023 ([link](#))
- HackerRank Python – Jul 2023 ([link](#))

## PROJECTS

### MediMart

Nov 2022 – Feb 2023

- Built an e-commerce website with a medicine ordering section, allowing users to browse products and manage their orders easily.
- Tools/Frameworks: HTML, CSS, Bootstrap 5, Python, Django, MySQL.
- Created a responsive design that worked well on desktop devices. Set up MySQL database to handle product listings and user order data efficiently.

## EDUCATION

Visvesvaraya Technological University

*Bangalore, India*

**Bachelor of Engineering** in Computer Science ; CGPA: 8.6

2020 – 2024

Wood Row Sr. Sec. School

*Bareilly, India*

**Class 12th PCM** - CBSE Board; Percentage: 85

2020

## ACHIEVEMENTS

- Achieved 3 Star in Codechef.
- **1st Place**, Coding Competition & Capture The Flag (CTF) – College Tech Fest, BNM Institute of Technology, 2023 - ([link](#)).