Swayam Subhankar Sahoo

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EDUCATION

Bachelor of Technology in Computer Science & Engineering September 2023 – Present
Odisha University of Technology & Research (OUTR) Bhubaneswar, Odisha, India
CGPA: 9.55

ACHIEVEMENTS

- **National Finalist, Deloitte Hacksplosion'26** – Top 10 rank out of 22,000+ reg., **earned Summer Internship @Deloitte**
- Selected for **Amazon ML Summer School 2026**, one of 3,000 chosen from 134,421 applicants.
- **2nd Place** at **Smart India Hackathon (SIH) 2024 Finals**, Hardware Edition (National Finalist, Top 50 teams).
- **1st Runners-up** at **Xplora Innovathon 2026**, Centurion University - among top 30 selected teams.
- **Semi-finalist** in **Flipkart Grid 8.0 & Flipkart Grid 7.0.**
- Solved **474+ Data Structures & Algorithms** problems on LeetCode (primarily C++), maintaining a **1619 rating**.

WORK EXPERIENCE

Technology & Transformation Intern | Deloitte India, Bengaluru Jun 2026 – Aug 2026

Department: *EAD - Technology & Transformation Department*

- Building a **proof-of-concept** for **AI agent observability** using **Langfuse: AgentOps**, instrumenting a ReAct-based agent to capture traces, token usage, latency, and execution flow for integration into Deloitte's enterprise AI ecosystem.

Software Development Intern | NTPC Ltd., Kaniha, Talcher | Report Jun 2025 – Jul 2025

Department: *Software Development Group, IT Department*

- Explored IT systems at a major thermal power plant, focusing on **SCADA**, **Real-Time monitoring,** and **Cybersecurity**.

PROJECTS

AI Agent Observability Platform | Deloitte Internal PoC Jun 2026 – Aug 2026

Tech Stack: Python, LangGraph, FastAPI, React, PostgreSQL, Langfuse, n8n, Docker

- Built an **internal, full-stack observability platform,** instrumenting a ReAct-based agent to capture **traces, token usage, latency, and execution flow.**
- Added **LLM-as-judge evals,** a **human annotation queue,** and a **real-time alerting pipeline** (threshold monitor -> webhook -> workflow automation -> email) to catch agent-quality regressions.

TARS – AI-Powered Runbook Generation & Validation | Hacksplosion'26 Feb 2026 – May 2026

Tech Stack: GenW AppMaker, GenW RealmAI, GenW Playground, GenW Agent Builder

- Created a **3-agent pipeline** (Step Extractor, Dependency Analyzer, Parameter Mapper) converting unstructured PDFs, Word docs, and emails into dependency-mapped, executable IT runbooks, with **human-in-the-loop approval, dry-run simulation, and rollback orchestration** via runtime credential injection.

Forest Fire Spread Simulation System | Github Jun 2025 – Jul 2025

Tech Stack: Python, TensorFlow, Keras, React.js, Flask, Docker, Google Earth Engine, Machine Learning

- Architectured a **predictive fire-risk system** generating next-day probability maps 24 hours before ignition for Uttarakhand forests, training a ResUNet-A segmentation model to **0.7-0.8 IoU** on a 10-band multimodal satellite dataset.

SKILLS

Languages: Python, C++, Javascript, Typescript.
Backend & Web Services: FastAPI, RESTful APIs, PostgreSQL, SQL, Docker, Git.

PUBLICATIONS

Next-Day Forest Fire Risk Prediction Using Machine Learning and Multimodal Satellite Data | https://www.mdpi.com/2673-4591/124/1/120 **Dec 2025**
Engineering Proceedings, MDPI (Peer-Reviewed) — ASEC 2025
Prajwal Mohapatra*, **Swayam S. Sahoo**, Adyasha Das

Predictive Modelling of Daily Wildfire Risk Using Multimodal Satellite Data and Machine Learning | ISBN: 979-8-89695-177-3 **Sept 2025**
EFES International Scientific Research and Innovation Congress-III
Prajwal Mohapatra*, **Swayam S. Sahoo**, Adyasha Das

EXTRACURRICULARS

- Recognised chess player with an **international FIDE-rating** of **1638** (17th KIIT International Chess Festival - 2026, Cat-C)