

Saijyoti Panda

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EDUCATION

PES University

Bachelor of Technology in Computer Science and Engineering — CGPA: 8.78

Bengaluru, Karnataka

2023 – 2027 (*Expected*)

EXPERIENCE

Software Developer Intern | 4good.ai

June 2025 - July 2025

- Developed full-stack web applications using **Next.js** and **Tailwind CSS**, integrating dynamic frontend components with a scalable **AWS**-based serverless backend.
- Designed and integrated a **Neo4j** graph database schema to represent digital twin relationships, enabling efficient traversal and contextual insights across user entities.

PROJECTS

Whiskey | *Go, Static Site Generator, Systems*

GitHub

- Built a dependency-aware static site generator in Go with Markdown support, layouts, partials, and **content-addressed invalidation**, achieving **3.1× faster builds than Hugo** on benchmark workloads.
- Implemented a **dependency DAG** with fingerprint-based invalidation to compute minimal dirty sets, rebuild affected nodes, and materialize sources into a persistent workspace for deterministic builds.

Polyglot Parser (MetaCall POC) | *C, Tree-sitter, CMake, Open Source*

GitHub

- Built a **Tree-sitter**-based analyzer for Python, JavaScript, and Ruby, normalizing symbols and imports into a unified **IR** for language-agnostic source analysis.
- Built **cross-language dependency graphs** and integrated it with the **MetaCall VSCode extension**

Incremental Lakehouse with CDC | *Spark, Kafka, Iceberg*

GitHub

- Implemented a CDC pipeline using Kafka, Spark Structured Streaming, and Apache Iceberg supporting ACID upserts, deletes, and snapshot versioning, with schema evolution across streaming batches.

Lexicon | *Go, Compilers*

GitHub

- Built an **interpreter for a custom language** called Sprout with lexer, parser, AST, evaluator, and interactive REPL. Added execution tracing, environment inspection, and detailed error diagnostics.

RAG Image Restoration | *PyTorch, FAISS, DA-CLIP, Hugging Face*

GitHub

- Built a retrieval-augmented image restoration pipeline using DA-CLIP embeddings and FAISS to retrieve semantically similar image patches from a 2M+ patch index, improving restoration through context-aware retrieval.

TECHNICAL SKILLS

Programming: Go, Python, C/C++, JavaScript, TypeScript

Frameworks: Next.js, React, Node.js, Express, Svelte, Tailwind CSS

ML & Data: PyTorch, Hugging Face, NumPy, Pandas, Scikit-learn, Apache Spark, Apache Kafka

Databases: Neo4j, MongoDB, MySQL

Cloud & Tools: AWS (Lambda, S3, DynamoDB), Docker, Git, Linux

POSITIONS OF RESPONSIBILITY

Treasurer, ACM PESUECC (2025–26): Managing budgets, sponsorships, and finances for chapter activities. Part of the main organizing team for the flagship hackathon, **Hacknight 7.0 for 220+ participants**.

Project Mentor, ACM AIEP: Mentored a team developing **radFS**, an in-memory FUSE filesystem in Go using Adaptive Radix Trees (ART), providing architectural and implementation guidance.

ACHIEVEMENTS

- Awarded **Prof. MRD Merit Scholarship (Top 5%)** and **Prof. CNR Rao Merit Scholarship (Top 20%)** for academic excellence.
- Winner, Qiskit Fall Fest 2024:** Recognized for excellence in a **Quantum Computing** event.
- Conducted a Git & GitHub workshop for **150+ students**.