

TUSHAR PANDHARE

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EXPERIENCE

AI/ML Intern — Vrittify AI

Jun 2026 – Aug 2026

Remote | Python, FastAPI, RAG, LangChain, LangGraph, Vector Databases, LLM Integration, REST APIs, Agile

- Designed and developed **GenAI-powered agents** for a production content-generation pipeline, redesigning fallback logic in **Python/FastAPI** to cut generation failures by an estimated 30% when upstream source data was unavailable.
- Built validation and normalization logic for a **RAG-based retrieval subsystem**, improving retrieval accuracy by ~20%, and added structured input/output **prompt** constraints that reduced manual QA review flags by ~25%.
- Built a **post-generation validation layer** to catch duplicates, placeholder text, and invalid patterns before delivery, reducing **malformed LLM outputs** by an estimated 40%.
- Debugged and resolved recurring runtime issues across a production **Python/FastAPI service** supporting GenAI workflows, improving pipeline uptime and reducing incident reports.

Software Engineer, Open Source — CNCF Karmada

May 2026 – Jun 2026

Remote | Kubernetes Multi-Cluster | Go, Python-based tooling, Distributed Systems, CI, GitHub

- Strengthened regression detection in a **distributed multi-cluster system** by authoring **Go unit and integration tests** for 10+ previously untested functions in cluster scheduling and resource propagation.
- Raised **code-quality standards** for a CNCF project by enforcing testing and monitoring practices through **peer code review**, CI validation, and technical discussions with maintainers.
- Identified, debugged, and tracked issues in a Kubernetes/container-orchestration codebase using GitHub issue tracking and **Agile sprint workflows** across global time zones.

Software Engineering Intern — Sunanda Infotech Pvt. Ltd.

Jun 2022 – Aug 2022

Nashik, India | JavaScript, HTML5, CSS3, Java, Debugging

- Delivered **5+ enterprise front-end modules** using reusable, well-designed component architecture; cut page-load time by **35%** and raised development throughput by **40%** through profiling and debugging.

PROJECTS

DocuGen — Document Intelligence Platform (github.com/tushar-pandhare/DocuGen)

Node.js, React, MongoDB, JWT, REST APIs, Natural-Language Retrieval

- Designed and built an end-to-end backend pipeline covering ingestion, processing, storage, and retrieval, implementing a modular, **OOP-based architecture** for maintainability.
- Designed a database-backed retrieval layer enabling **natural-language querying** over ingested documents (an early **RAG-style pattern**), with secure REST APIs using **JWT authentication** and Role-Based Access Control (RBAC).
- Built the React frontend supporting document upload, Q&A interaction, and response display, integrated end-to-end with the backend service.

Local File Search Engine (github.com/tushar-pandhare/Local-File-Search-Engine)

Java (OOP), Inverted Index, Data Structures & Algorithms

- Built a **ranked search engine** in Java using an inverted index and modular file parsers, cutting average search latency by an estimated 50% versus naive linear scan.
- Applied core **data structures** (HashMaps, File I/O) to optimize retrieval performance, ranking results by relevance rather than simple keyword presence.

TECHNICAL SKILLS

Languages: Java, Go, JavaScript, Python, C++

Tools & Productivity: Git, GitHub, **Microsoft Office**, CI/CD, REST APIs, FastAPI, Unit & Integration Testing, Code Review

Core: Data Structures & Algorithms, OOP, System Design, Distributed Systems, Kubernetes

AI / LLM: RAG, LangChain, LangGraph, LLM Evaluation, Vector Databases, Prompt Engineering

Soft Skills: Communication, Time Management, Problem Solving, Requirement Analysis, Teamwork

EDUCATION

SGGS Institute of Engineering & Technology, Nanded

2024 – 2027

B.Tech, Computer Science Engineering (Final Year) — CPI: **8.7/10.0**

LEADERSHIP & ACHIEVEMENTS

- President, SPARK Technical Club** — selected among 200+ students to lead technical initiatives; mentored juniors in DSA, System Design, and interview preparation.
- Organized and completed 4+ technical events under SPARK with 200+ combined student participation.
- Gold Medalist, Institute Topper** — secured 96.71% in Diploma, Computer Technology; ranked 11th in Maharashtra state.
- Competitive Programming: solved **1,000+ DSA problems** on LeetCode; peak rating 1675 (ranked 563/34,267).