

Vaibhav Dangwal

AI-Driven Technical Writer | Automation Enthusiast | Creative Technologist

Cell: +91-7895388642 | Email: whatsupvaibhav@gmail.com



Technical writer and AI practitioner with 10+ years of experience delivering impactful content and tools at the intersection of writing, automation, and AI. Proven expertise in building generative AI-based documentation agents (RAG, embeddings, chunking), automating documentation workflows using Python (PDF/HTML QA, release notes, TOC indexing), and scaling structured content using DITA/XML. Passionate about building AI solutions that reduce manual effort and enhance content discoverability.

Experience Summary

- 10+ years as a Technical Writer
- 2.5 years as a Scrum Master (Thales)
- Built multiple automation tools for document workflows
- Certified Product Owner (CSPO®)
- 5+ years Interviewing and Training
- Created offline AI chatbot for PDF/HTML-based QA

Tools and Technologies

- **AI / NLP:** RAG-based agents, FAISS, Graph DB, Claude, ChatGPT, Cursor, sentence-transformers
- **Tech Writing and CMS:** DITA, FrameMaker, Oxygen XML, Heretto, MadCap Flare, RoboHelp, AEM
- **Scripting and Tools:** Python, Git, Bash, VS Code, Regex, Markdown, REST APIs
- **Process Optimization:** Automation for QA, publishing, TOC generation, file validation
- **UI/UX Writing:** Developer-facing docs, UI text, API references, user journeys
- **Design and Media:** Photoshop, Lightroom, Snagit, DaVinci Resolve, Camtasia, After Effects

Experience Summary

Ciena

Senior Analyst, Product Documentation Development

(Mar 2023 - ongoing)

Senior Technical Writer | AI Automation Specialist and Tool Developer

Apart from regular tech-writer related responsibilities, I have been working to future-proof the team and processes as the world is adapting to AI. Below are some of the things that I have built:

- **AI-Chat bot for technical documentation**
Built a RAG-based solution and leverage Vector DB, Graph DB, chunking, ranking, indexing, semantic search, etc. This is an independent, offline AI agent that can ingest PDFs and HTML files and then provide answers related to them. Since knowledge is not internalized, and the SLM acts only on the retrieved chunks, **there is near zero hallucination.**
- **PDF-Checker:** Automates the process of checking various errors in PDFs and HTMLs before they are published on the server. This tool detects errors, such as broken links, various formatting errors, missing images, incorrect legal information, incorrect author, document title, filename, etc. This collectively saves 3-5 days for the entire team of 20 writers.
- **CRN-Maker:** Automates the process of creating Customer Release Notes. It pulls data from the JIRA tickets and confluence pages and processes them to create release notes. It takes care of the formatting errors, and dita tags, and creates FrameMaker ready ditamaps and topics files, that can be directly uploaded to the CMS. It can also compare older and newer versions of CRN to tell the delta and identify the changes. It saves 3-4 days of work for a writer for each CRN.

- **Many other case-specific small scripts:** Such as, a script to zip and upload entire documentation suite (50+ folders, each having 10 pdfs and htmls folders) to production server, a script to automate process of indexing and creating a detailed TOC for semiconductor and chips documentation (excel to pdf), tools to extract images and tables from legacy documentation, etc.

Aristocrat Technologies

Senior Technical Writer | For casino management systems

(Dec 2020 – Mar 2023)

- Manage and prioritize the product's documentation backlog.
- Serve as a liaison between clients, development, marketing, sales, and documentation teams.
- Working with multiple teams to deliver documentation on software products and services.
- Responsible for 30+ documents for every release.
- Taking interviews and grooming new joiners.
- In charge of designing and maintaining the user interface of the document's portal.

THALES

Technical Writer + Scrum Master | Documentation for Cryptography Products

(Jun 2018 – Oct 2020)

Responsibilities as a Writer

- Plan, write, and deliver various types of customer assistance documentation products, including:
 - Online help
 - Customer Release Notes (CRN)
 - User Guides
 - Reference manuals
 - Tutorials
 - API Guides
- Create documentation for different audiences (engineers, technicians, and scientists).
- Work directly with developers, applications engineers, business analysts, program managers, and product owners.

Responsibilities as a Scrum Master

- Responsible for reporting team and project status, guiding the team on Agile/Scrum principles.
- Organizing ceremonies: Sprint Planning, Sprint Review, Sprint Retrospective, Backlog Grooming, etc.
- Supporting the Product Owner, especially in grooming and maintaining the product backlog.
- Removing impediments and guiding the team.
- Facilitate discussion, decision-making, and conflict resolution.

Interra Systems

Information Designer | Documentation for software used in the media industry

(Mar 2017 – Apr 2018)

APTARA

Technical Writer | Technical documentation for automotive clients

(Apr 2016 – Mar 2017)

Solar Hub

Technical Writer | Technical documentation for field engineers in energy sector

(May 2015 – Apr 2016)

Personal Projects and Highlights

- **Meta-CRAG-MM Challenge (2025):** Designed and built a multi-source augmentation pipeline for multimodal (image + text) retrieval. Implemented custom sentence-level embeddings and hybrid scoring mechanisms combining cosine similarity, metadata matching, dialogue context, and diversity penalties. Developed a compact retrieval-augmented generation (RAG) system optimized for lightweight local models (e.g., Phi-2, Gemma-2B), balancing retrieval accuracy and model inference costs. Achieved high precision in multi-modal QA tasks without relying on large-scale LLMs.
- **Image-Based Technical Search (2024):** Built RAG-style tool that maps image inputs to index via OCR and caption embeddings.

Research Papers and Extra Curricular

- **Bumper Crash Analysis using Ansys** (Oct 2015)
Optimization of a TATA 407 LPT bumper in CATIA V5 and then crash testing on Ansys (in explicit dynamic workbench). Results: 30% reduction in weight, 15% increase in overall performance.
- **Simulated Designing and Testing of a Military Helmet for Ballistic Impact** (Nov 2014 – Feb 2015)
The helmet is made of a Polyurethane Cover and Steel 4340 Cage, designed for Ballistic Impact. Selected for the November 2014 *International Journal of Aerospace and Mechanical Engineering* issue.
- **Ballistic Simulation of the Impact of an AK47 bullet on an assemblage made of Float glass and Plexiglas Sheets arranged in an alternate order** (Sep 2014 – Nov 2014)
Presented as a research paper at National Conference on *Emerging Trends in Aircraft Design and Manufacturing*.
- **Efficycle: Design, Fabrication, and Testing of a 3-wheeled, 2-seater vehicle with a manual and electric drivetrain.**
Winner **AIR 4** and were also Awarded “**Best Marketing Award**” competing among 180 teams.
- Apart from work, I have been actively involved in **creating corporate videos** at Ciena. These videos were mostly about the Ciena’s contribution towards social issues.

Publicity Chair for SAEINDIA (SAE India) | 2013-14 (College Campus)

Increased visibility of SAE India in the university by carrying out effective marketing campaigns and organizing various activities, events, and workshops. I raised the membership count by 300 (approx.) in 1 year.

Hospitality Manager | Ignite 2013 (University Techfest)

Led a team of 20 students to provide personal attention and facilities to all guests visiting the university.

Miscellaneous

- Presented a research paper at “National Conference on Emerging Trends in Aircraft Design and Manufacturing”, organized by DRDO, the Aeronautical Society of India, and the Institution of Engineers India.
- **AIR 35 in Technothon 2009 (IIT Guwahati).**
- Attended “Workshop on Automobile Designing using Reverse Engineering” at IIT Bombay.

Education

- **B.Tech in Automotive Design Engineering** from the University of Petroleum & Energy Studies, Dehradun.
- **HSSC (Class 12th) in 2011** from D.H.D.S.D Public School, Ambala Cantt.
- **SSC (Class 10th) in 2009** from D.H.D.S.D Public School, Ambala Cantt.

Hobbies/Interests

- **Creating Corporate Videos** (YouTube channel’s name is [ParvatLok](#) – corporate videos are not listed publicly because of obvious reasons.)
- **Photography** (I have a Sony A7iii with 18mm, 24-70mm, 50mm lenses, a gimbal, whole studio setup)
- **Sketching** (I use WACOM Intuos + Galaxy S6 Lite tab)
- **Photo-Manipulation / Graphic Design** (with Photoshop and Lightroom for photo manipulation purposes)
- **Playing Video Games** (FPSs mostly)
- **CAD-based 3D Modeling** (with SolidWorks, CATIA V5, Google Sketchup)