

Bharat Singh Parihar

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SUMMARY

Computer Science undergraduate specializing in Data Science, skilled in building scalable AI and decentralized systems. Experienced in interdisciplinary research, IEEE and CSI leadership, and national hackathons. Strong at translating business needs into data-driven solutions and collaborating across teams for impactful results.

EDUCATION

Symbiosis Institute of Technology
B.Tech.(Hons.) CSE Core Data Science

-Nagpur, India
CGPA: 7.65/10.00 (2026)

Kendriya Vidyalaya
SSC, PCM with Computer Science

- Dahi Chowki, Unnao
Percentage: 87.44% (2022)

SKILLS

Languages & Scripting: Python, JavaScript, TypeScript, R, SQL, Go (Golang), Java, C++, HTML/CSS, Bash

AI & Machine Learning: TensorFlow, PyTorch, Keras, Scikit-learn, YOLOv8, OpenCV, Pandas, NumPy, Seaborn, Matplotlib, PyCaret, NLTK, SpaCy, GAN, LSTM, RNN, CNN, MCDM

Modern AI Systems & Frameworks: LangChain, LangGraph, LlamaIndex, GraphRAG, AutoRAG, Agentic AI, RAG Pipelines, Text-to-SQL

Web & App Development: React.js, Next.js, Remix, Node.js, Express.js, FastAPI, Flask, Flutter, Tailwind CSS, ShadCN, Bootstrap, WordPress, WebSockets, REST APIs, OAuth2, JWT

Cloud & DevOps: AWS (EC2, Lambda, S3), GCP (Firestore, Compute), Docker, Kubernetes, Firebase, Render, Supabase, Netlify, Vercel, GitHub Actions, CI/CD, Nginx, PM2

Databases & Caching: PostgreSQL, MySQL, MongoDB, Redis, Firebase Realtime DB, Neo4j, Pinecone, FAISS

Data Visualization & BI: Power BI, Shiny, ggplot2, Matplotlib, Seaborn, Dash, Excel, Streamlit

Software Engineering & Practices: Agile Methodology, Clean Architecture, Microservices, Serverless Functions, TDD, Monorepos, API Design, Secure Auth, Web Accessibility

Tools & Platforms: Git, GitHub, VS Code, Figma, Postman, Jupyter, Webpack, Vite, Anaconda, AutoCAD, FFMPEG

PROFESSIONAL EXPERIENCE

PGDAV College – University of Delhi | Summer Research Intern

May 2024 – July 2024

- Developed a CNN-based deep learning model for real vs. fake face distinction, achieving 95% accuracy.
- Integrated Multi-Criteria Decision-Making (MCDM) for enhanced decision precision.

Kodacy | Student Intern

Jan 2023 – Feb 2023

- Conducted simulations to guide robotic prototyping, improving efficiency by 15%.

PROJECTS

[GraphRAG Research Assistant](#) | LangChain, LangGraph, OpenAI, Neo4j, FAISS, PyMuPDF, Pandas Feb 2025 – May 2025

- Built a multi-hop AI assistant using GraphRAG and Neo4j to enhance document-level QA accuracy by 4x.

[AI-Driven Image Encryption System](#) | PyTorch, GAN, LSTM, SRDNN, NumPy, Docker Feb 2025 – May 2025

- Engineered a GAN-LSTM encryption system achieving 50% faster runtime than AES-256 with zero fidelity loss.

[Federated Learning for Anomaly Detection](#) | FedML, TFF, TLS, NumPy, scikit-learn, gRPC Jan 2025 – May 2025

- Developed a federated fraud detection pipeline with 91% accuracy across distributed IoT environments.

[Medical Insurance Cost Prediction](#) | R, Shiny, glmnet, randomForest, caret, ggplot2 Sep 2024 – Nov 2024

- Deployed a regression-based premium predictor with RMSE 300 and R² 0.85 using Shiny dashboards.

[Book Detection for Visually Impaired](#) | OpenCV, PyTesseract, pyttsx3, Leptonica, ImageMagick Feb 2024 – Jun 2024

- Built a real-time OCR-to-speech system to improve reading accessibility for the visually impaired.

[DeepFake Detection](#) | TensorFlow, Keras, CNN, MCDM, NumPy, Matplotlib May 2024 – Jul 2024

- Created a CNN-based deepfake detector enhanced with MCDM for multi-factor prediction reliability.

[Brain Tumor Detection](#) | YOLOv8, PyTorch, OpenCV, Docker, CUDA Dec 2023 – Feb 2024

- Deployed an MRI-based tumor detector with 89% accuracy and 15% fewer false positives using Docker.

[AquaTrace Software](#) | Figma, TypeScript, HTML/CSS, ReactJS, Webpack, Git, Firebase Aug 2023 – Oct 2023

- Experimented with API's OAuth Access Tokens to get data from the given pipeline.

+ Built 10+ cross-domain projects in Web3, ML, AI, NLP, and full-stack systems.

ACHIEVEMENTS

AWARDS

- 1) 🏆 **Winner**, Web 3.0 Hackathon, BITS Pilani 2025
- 2) 🥈 **4th Place**, CyberHack Maha Hackathon 2025
- 3) 🏆 **Winner**, GDSC Hackathon 2023
- 4) 🥉 **3rd Place**, IEEE Research Hackathon 2023

PUBLICATIONS

- [1] B. S. Parihar, et al., **Integration of Computer Vision for Book Detection and Text-to-Speech Conversion**, IEEE ICISCT 2024, Kookmin University, Korea (SCOPUS)
- [2] B. S. Parihar, et al., **The Impact of Digitalization on Psychological Treatment**, IEEE ICISCT 2024, Kookmin University, Korea. (SCOPUS)
- [3] B. S. Parihar, et al., **Realtime Cryptojacking in Advanced mobile devices**, IEEE ICPCT 2025, Amity University, Noida, India. (SCOPUS)
- [4] B. S. Parihar, et al., **Revolutionizing Industry 4.0: Multi-Level Federated Learning for Dynamic Ecosystem** – (Book Chapter) 2025
- [5] B. S. Parihar, et al., **AI and Forecasting for Renewable Energy Generation** – (Book Chapter) 2025

CERTIFICATIONS

- Fundamental of Deep Learning ~NVIDIA
- Fundamental of Accelerated Computing with Cuda C ~NVIDIA
- Cloud Data Engineer ~Google
- Accelerating CUDA C applications with Multiple GPUs ~NVIDIA
- SQL (Basic, Intermediate, Advance) ~HackerRank
- SDE Intern ~HackerRank
- Machine Learning Specialization ~Stanford University
- Cloud Foundations and Cyber Security Foundations ~Amazon AWS
- Certified System Administrator ~ServiceNow
- Certified Application Developer ~ServiceNow

LEADERSHIP EXPERIENCE

Computer Society of India (CSI) Student Chapter

Chair

Dec 2024 – May 2025

SITNovate 24 Hours Hackathon

Organizer

19, 20 Feb 2025

Computer Society of India (CSI) Student Chapter

Founder Vice Chair

July 2024 - Nov 2024

IEEE Student Chapter

Core Member

Dec 2023 - Jun 2024

LANGUAGES

- 1) **English (Fluent)**
- 2) **Hindi (Native)**
- 3) **Spanish (Basic)**

REFERENCES

Dr. Sudhanshu Maurya

Associate Professor & Research Head, SIT Nagpur
Symbiosis International (Deemed University), Pune, India
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Prof. Dr. Geeta Aggarwal

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