

SUSHANT SAGAR

Software Developer | AI/ML Engineer | Full Stack & Embedded/IoT Developer

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PROFESSIONAL SUMMARY

Software Developer at Pashupatastra Solutions with hands-on ownership across six initiatives spanning AI platforms, scientific software, connected-device applications, engineering quality control, and biosensor workflows. Experience covers Python APIs, React/TypeScript, Electron, Android integration, offline-first systems, STM32, AD5941 evaluation hardware, USB/SPI communication, and embedded debugging. B.Tech in CSE (AI), CGPA 8.81; prior Diploma in Electronics, CGPA 8.96. Winner of Smart Bihar Hackathon 2023 and trainer of 300+ students in Arduino and robotics.

CORE TECHNICAL SKILLS

AI & Scientific Systems: Python, TensorFlow, Keras, Scikit-learn, CNNs, transfer learning, ensemble models, computer vision, multi-agent systems, model routing, RAG, scientific data engineering, responsible AI

Full Stack & Desktop: React, Next.js, TypeScript, Node.js, Electron, REST APIs, Python APIs, Android integration, Tailwind CSS, NextAuth, Prisma ORM, offline-first applications

IoT & Embedded: STM32, AD5941 Evaluation Board, ESP32, Arduino, NodeMCU, Embedded C, firmware development, SPI, USB device communication, sensor integration, wireless systems, hardware debugging

Data, Cloud & Tools: PostgreSQL, MySQL, MongoDB Atlas, SQLite concepts, Git, GitHub, OCI, Cloudinary, Postman, Jupyter, Google Colab, Packet Tracer

PROFESSIONAL EXPERIENCE

Software Developer

Jun 2026 - Present

Pashupatastra Solutions, New Delhi | College Placement - Full-Time

- Contribute across six product initiatives spanning AI platforms, connected-device applications, scientific software, biosensor workflows, and engineering quality control.
- Develop full-stack and offline-capable applications using Python APIs, React, TypeScript, Electron, Android integrations, relational data systems, and automated workflows.
- Work with STM32 and AD5941 evaluation hardware on embedded integration, USB/SPI communication, device control, measurement workflows, and hardware debugging.
- Own product planning, implementation, testing, performance improvement, and delivery while protecting proprietary architecture, client information, and research data.

Data & Records Management Intern

Dec 2025 - Jun 2026

Land Revenue Department, Bihar Government | Patna, Bihar

- Digitised and restructured land records to improve retrieval across government workflows.
- Worked with large-scale records systems, data integrity practices, and digital-governance processes.

Arduino & Robotics Instructor (Freelance)

Jul 2023 - Jun 2025

SVN Infra & Solar Services | TechGlaz Labs | NKB Infinity | Bihar

- Trained 300+ students across four engagements in Arduino, IoT fundamentals, robotics, and sensor-based prototyping.
- Designed hands-on lab modules and mentored student hardware projects from wiring through testing.

EDUCATION

B.Tech - Computer Science & Engineering (Artificial Intelligence)

2023 - 2026

Purnea College of Engineering | Bihar Engineering University | CGPA 8.81 | University Top 5

Diploma - Electronics Engineering

2020 - 2023

Government Polytechnic Banka | SBTE, Patna | CGPA 8.96 | 2nd Rank

SELECTED INDUSTRY PROJECTS - PASHUPATASTRA SOLUTIONS

Public-safe portfolio summary. Proprietary architecture, client information, research datasets, and internal workflows are intentionally excluded.

bFan 100% complete | 70% contribution
Smart-device control application focused on simple onboarding, reliable device pairing, and an intuitive daily-use remote experience.
Skills: mobile development | IoT integration | device control | UX | testing

Oncogon AI 20% complete | 80% contribution
Research-focused AI platform supporting structured scientific information, transparent analytical workflows, and responsible research use.
Skills: AI/ML platforms | scientific software | data engineering | governance | responsible AI

Multi-Model 40% complete | 40% contribution
Controlled multi-model AI workspace designed to support engineering, research, automation, and tool-assisted workflows.
Skills: multi-agent systems | model routing | RAG | tool integration | automation

UPR Manager 80% complete | 90% contribution
Offline-capable engineering and quality-control workspace for connected scientific measurement hardware.
Skills: STM32 | AD5941 | Electron | React/TypeScript | Python APIs | hardware QC

Strip Tech 85% complete
Research and engineering initiative for a reusable electrochemical sensing platform and associated validation workflows.
Skills: AD5941 | electrochemical sensors | biosensor R&D | hardware integration | prototyping | QC

AddIPRECISE 90% complete | 60% contribution
Operator-facing application ecosystem for configurable electrochemical testing, connected-reader operation, and result workflows.
Skills: STM32 | AD5941 | Android | USB integration | embedded systems | offline workflows

SELECTED PERSONAL & ACADEMIC PROJECTS

SafeSkinAI 2.0 - Multi-Class Skin Cancer Detection Apr - May 2026
Python, TensorFlow, DenseNet201, Inception V3 - ensemble workflow for seven-class dermoscopic image classification.

Developer Portfolio & Project Marketplace Oct 2025 - Jun 2026
Next.js, TypeScript, PostgreSQL, Prisma - production marketplace with payments, 13+ models, 50+ routes, SEO, PWA, and cloud storage.

Breast Cancer Prediction Model - 96.4% Accuracy Jun - Jul 2025
Python, Scikit-learn, Logistic Regression - evaluated with ROC-AUC and confusion-matrix analysis; includes an interactive interface.

SVN Student Registration & Payment Portal Aug - Sep 2025
Next.js, MongoDB, JWT, Razorpay - registration, payments, admin analytics, notifications, exports, and certificate validation.

Smart EV Wireless Charging Monitor Jan - Jul 2023
ESP32, Arduino, Embedded C, Blynk - real-time monitoring and remote control; winner at Smart Bihar Hackathon 2023.

CERTIFICATIONS

Oracle OCI 2025 AI Foundations Associate; Cisco CCNA (Introduction, Switching/Routing/Wireless, Enterprise Security & Automation); Cisco Cybersecurity Essentials and Python Essentials 1 & 2; Machine Learning - Internshala; Python for ML/Data Science/Web - IIT Roorkee; Google IT Support Professional; Full Stack Web Development - TechGlaz Labs; Arduino - IIT Bombay.

ACHIEVEMENTS

- Winner - Smart Bihar Hackathon 2023: 1st Prize for IoT-based EV Wireless Charging Monitor.
- 2nd Prize - World Youth Day 2023 state-level innovation competition, Patna.
- Academic Topper - Diploma: 2nd Rank for three consecutive years; CGPA 8.96; campus-selected by Pashupatastra Solutions in 2026.