

Shashaank Srivastava

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EDUCATION

- **Indian Institute of Information Technology, Design and Manufacturing** Jabalpur, India
B.Tech in Smart Manufacturing — CPI: 8.3 Aug 2023 – May 2027

EXPERIENCE

- **Open Source Contributor – Meshery** Jul 2025 – Aug 2025
Layer5 - Golang, Next.js, Meshery, Kubernetes, GraphQL, Next.js, Hugo
 - Enhanced mesheryctl CLI by improving UX flows, refining command behavior, and adding robust error handling in Golang.
 - Fixed issues in the Meshery Next.js UI, improving reliability, Kubernetes connection flows, and state management
 - Maintained Layer5 Academy, developing a structured platform for cloud-focused companies to publish training material and certification.

PROJECTS

- **PINN for Stress Profile prediction in Incremental Sheet Forming process**
Tech: Python, PyTorch, Scikit-learn, PINN, RNN
 - Designed a Physics-Informed Neural Network (PINN) with PDE constraints to predict stress distribution.
 - Generated custom simulation dataset of 600 data points under varying load conditions.
 - Combined RNN with PDE-based loss functions for preliminary results; optimization algorithms in progress.
- **Buddy — AI-Powered Note-Taking & Study Application - [Github](#)**
Tech: Next.js, TypeScript, Node.js, PostgreSQL, Drizzle ORM, OpenAI API, Supabase
 - Built a **scalable, API-first backend** for an AI-driven note-taking platform used for summarization and study workflows.
 - Integrated **OpenAI APIs** for automatic note summarization, key-point extraction, and flashcard generation.
 - Designed and integrated a **Retrieval-Augmented Generation (RAG) pipeline** to generate context-aware summaries and flashcards from user notes.
 - Implemented **secure authentication and authorization** using Supabase Auth with row-level security (RLS).
 - Developed asynchronous AI-processing pipelines to handle long-running requests efficiently.
- **IntelliPrint – Automatic 3D Printer Part Removal – [GitHub](#):**
Tech: Raspberry Pi, Arduino, Solidworks, Flask(Python)
 - Developed a comprehensive **end-to-end automation system** that combined Arduino, Raspberry Pi, and Python. This system featured a **Python-based GUI for operator control, real-time system status monitoring, and print-queue management**, and it incorporated manual override capabilities with immediate feedback.
 - Designed a stepper-based removal mechanism with limit-switch precision for controlled actuation.
 - Integrated real-time sensing and safety logic similar to **for fail-safe operations**.
 - Published in [ASME IMECE 2025](#) and filed a **patent (2025)**.

ACHIEVEMENTS & AWARDS

- **Runner-Up, Duality AI Track – HackByte 3.0** (Trained AI vision models using synthetic and manipulated data to achieve top performance metrics)

PATENTS & PUBLICATIONS

- **“An Automated Part Removal and Queuing Framework for Fused Filament Fabrication Process,”** Patent 2025
- **“Automated Part Removal and Queuing System for FFF 3D Printing,”** ASME IMECE 2025.

CERTIFICATIONS

- **Supervised Machine Learning** — Stanford(Coursera)
- **Database Management Systems** — NPTEL

SKILLS

- **Programming:** C++, Python, Javascript, SQL, Golang
- **Systems & Tools:** VSCode, Colpilot, Docker, Git, Github, Postman, Linux
- **Languages:** English, Hindi, Japanese

EXTRACURRICULARS

- Solved **700+ problems** across various coding platforms: [LeetCode](#), [Codeforces](#), [CodeChef](#)
- **Co-coordinator:** Aero Fabrication Club — conducted drone autonomy, RC gliders, control systems, and flight-testing workshops, managing working committees, organising sessions, and handling finances.