Ojasw Kant

COMPUTER SCIENCE AND ENGINEERING STUDENT
AT
SHIV NADAR INSTITUTE OF EMINENCE

Computer Science & Engineering undergraduate student (SNIoE, 2024-28) focused on backend/software + ML systems for autonomous applications. Interested in building data/ML pipelines; strong in Python/C and DSA

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EDUCATION

Bachelor of Technology in
Computer Science and Engineering | 2024-28
Shiv Nadar Institute of Eminence (SNIoE) (8.73 GPA)

- CSE major pursuing a mathematics minor with a bias to courses in ML
- Member *American Society of Mechanical Engineers* (ASME)

12th Standard Education | 2023
Birla Vidya Niketan (BVN)

- CBSE Affiliated school
- Active member Atal Tinkering Lab

GETTING OFF THE GROUND

Soft skills

- C, Python, Java, MIPS Assembly
- Mounted electronics, on-board computing
- Machine Learning, Computer VIsion
- DSA, Data Sorting, analysis
- Control systems design, implementation

Hard skills

- 3D printing and processing
- Designing for CNC machining
- Electromechanical assembly of robotic components

PROJECTS AND COMPETITIVE EXPERIENCE

Capstone Project; AI-Powered Aerospace Design Assistant
MAT496

- Built an AI assistant that turns text requirements into preliminary aircraft/rocket/satellite designs with computed specs + citations.
- RAG over 30+ arXiv/NASA papers using embeddings + vehicle-type vector index.
- Added LLM-based checks (auto-fill missing + validate scale) to prevent unrealistic sizing.
- Built physics-based tools per vehicle type and routed the right toolchain automatically.

NIDAR 2025
Team J.E.D.I

- Made a fully autonomous multi-drone SAR (Search And Rescue) system as a part of the disaster management problem.
- Computer Vision model training, post-processing and optimization for deployment
- Autonomy architecture and implementation
- CAD and analysis, fabrication and assembly

Smart S.N.U. Hackathon (SSH)
Team MORNIS

- CV based trash detection system that will route nearby garbage trucks to locations based off of trash volume and current truck location
- Semantic segmentation with custom method to approximate trash volume
- Qualified to participate in **SIH**

Hackdata 2026
Team Dust (ongoing)

- Using Qwen3-VL for video-grounded VLM reasoning (time-chunked clips/frames) in a multimodal RAG search system.
- Built a media pipeline that chunks content (30–60s), generates multimodal embeddings, indexes them in Chroma/Qdrant, and retrieves relevant moments for LLM answers.
- Projected 60–120 fps processing, 10–100x faster content discovery vs. manual review

PROJECTS & HOBBIES

3D Printing and Rapid Prototyping

- Self assembly of a Prusa i3 mk2s
- 3D designing of parts and models to print
- Analysis of prints using various methods

Working on

- Upcoming project for hackathon; Multi-modal context engine