

Ashish Patil

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B.tech-Electronics and Communication Engineering

Visvesvaraya National Institute of Technology, Nagpur

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Education

Visvesvaraya National Institute of Technology

Bachelor of Technology in Electronics and Communication Engineering (Current CGPA: 6.37)

Expected Sept 2027

Nagpur, Maharashtra

- **Relevant Coursework:** Computer Programming(C++ & python), **Numerical Methods & Probability Theory**, Data Structures(C++), Microprocessors & Microcontrollers, **Linear Algebra & Differential Equations**, Computer Architecture & Organization, Concepts of Operating Systems, **Machine Learning W/ Python**, Adaptive Signal Processing, Advanced Digital Signal Processing

Professional Summary

Electronics and Communication Engineering undergraduate with a strong foundation in mathematical modeling and quantitative analysis. Proven entrepreneurial drive, having secured institutional funding for an independent technical MVP. Passionate about applying statistical methods, algorithmic problem-solving, and data assimilation to international capital markets.

Experience

Nexalaya (Campus Digitization MVP)

Co-Founder/Technical Lead

June 2025 – June 2026

Nagpur, Maharashtra

- Conceptualized and pitched a campus digitalization initiative, successfully securing a 60,000 INR grant from VNIT to build the Minimum Viable Product (MVP).
- Designed a scalable system architecture integrating hardware IoT modules with real-time facial recognition, delivering a 98% reduction in attendance processing time (from 10 minutes to 10 seconds per class).

Bookstaken

Web & Business Development Intern

Mar 2026 – Apr 2026

Nagpur, Maharashtra

- Executed 200+ strategic sales calls, analyzing client feedback to adjust outreach strategies, resulting in a 20% boost in lead generation.
- Developed backend infrastructure and interactive modules for the core platform, optimizing database performance to increase traffic retention

Skillified Mentor

Backend Development Trainee

Mar 2026 – Apr 2026

Remote

- Architected secure, scalable data pipelines and authentication APIs, ensuring robust data handling and system stability under load.
- Built a blog API supporting CRUD operations, pagination, search and authentication for protected routes ,understood importance of database schema and search efficiency

Projects

Predictive Modeling & Optimization: Image Super-Resolution with FSRCNN | PyTorch, Convolutional Neural Networks, OpenCV

- Engineered a mathematical FSRCNN model in PyTorch utilizing an hourglass architecture—incorporating feature extraction, 1x1 convolutional shrinking for dimensionality reduction, and deconvolutional upsampling
- Optimized model accuracy by calculating a weighted combination of pixel-wise Mean Squared Error (MSE) and VGG-16/19 Perceptual Loss to evaluate complex spatial features.
- Systematically reduced computational complexity and memory consumption against baseline SRCNN models by eliminating external bicubic interpolation and learning upscaling operations internally.
- Developed custom data extraction pipelines for large-scale datasets (BSD-100, Set-5, Set-14, Urban100) and maximized parameter efficiency to enable flexible scalability across multiple scaling factors.

Technical Skills

Languages & Databases: Python, C++, JavaScript, MySQL, Node.js.

Quantitative & ML: PyTorch, Convolutional Neural Networks, Mathematical Modeling, Computer Vision

Tools & Others: Git/GitHub, VS Code,LTSpice,Data Structures, Research Paper Implementation,Debugging, Problem-Solving