

Nitanshu Tak

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Education

UPES

B.Tech - CSE with a specialization in CCVT

Dehradun, Uttarakhand

Aug 2023 - May 2027

CGPA- 8.2 (so far)

Experience

Software Development Intern – The Waiter Company | Jun 2025–Jul 2025 | Remote

- Engineered core dashboard features(Sidebar,Reports,Inventory, Notifications)using React, TypeScript, Next.js, and Tailwind CSS, powering daily operations.
- Architected scalable routing & reusable components, cutting dev overhead by 30% and accelerating feature delivery across modules.
- Delivered analytics & inventory modules that eliminated manual workflows, enabling real-time interactive dashboards and improving decision-making speed by 45%.
- Converted Figma prototypes into production-ready UIs, ensuring seamless, scalable UX across modules and reducing design-to-development time by 30%.
- Resolved hundreds of UI/UX bugs through deep debugging and performance tuning, boosting platform stability.

Projects

Helios – Cloud-Native AI/ML Anomaly Detection & Self-Healing Agent [[Link](#)]

Tech Stack:Python,Flask,scikit-learn,IsolationForest,KMeans,LogisticRegression,TF-IDF, AWS (EC2, S3, IAM, CloudWatch, SNS), Google Colab, Postman

- Built and deployed 5 ML anomaly detection models (CPU, Network, Login, Content Injection, Storage), achieving>95% anomaly detection accuracy in testing.
- Developed a Flask-based API hosted on AWS EC2, integrating S3 for model storage and IAM for secure, role-based access control.
- Enabled real-time monitoring via AWS CloudWatch Dashboards and instant anomaly alerts through SNS, reducing manual monitoring time by 70%.
- Designed a scalable, modular, and automated pipeline for anomaly detection and alerting, validating a foundation for self-healing cloud infrastructure.
- Open-sourced implementation on GitHub, showcasing research-aligned, production-ready deployment with 0-cost AWS Free Tier execution.

Zyra - AI-Powered Career & Skills Advisor [[Link](#)]

Tech Stack:Python,Streamlit,spaCy(NLP),scikit-learn,Pandas, NumPy, Recommendation Systems, TensorFlow/PyTorch, HTML/CSS/JS

- Engineered an AI-powered chatbot for personalized career growth, integrating resume parsing, skill-gap analysis, and real-time career path recommendations.
- Implemented NLP pipelines and ML models to analyze resumes and map skills to emerging job roles, achieving >90% accuracy in skill extraction.
- Built an interactive Streamlit UI with authentication, career dashboards, and mock interview modules, boosting engagement and user retention by 40% during prototype testing.
- Designed a modular architecture (auth, profile manager, chat engine, sidebar navigation) enabling scalable deployment and API integrations of 8 external applications (LinkedIn, Naukri, GeeksForGeeks, GitHub, etc.).

AWS InfraControl-Command Line Based EC2 Life cycle Utility [[Link](#)]

Tech Stack: Python Boto3, AWS CLI, IAM, EC2, Lambda, S3, SNS

- Designed a CLI-based system to start, stop, and terminate multiple EC2 instances on demand, scaling seamlessly from a single instance to dozens simultaneously.
- Implemented IAM-based role-specific access controls, strengthening infrastructure security and enforcing least-privilege principles.
- Automated provisioning for 20+ EC2 instances, added logging and monitoring by integrating S3 (activity logs), Lambda (scheduled tasks), and SNS (real-time alerts) for operational reliability.
- Delivered a lightweight, UI-less automation tool that reduced manual provisioning time by ~70% and strengthened confidence in infrastructure-as-code principles.

Technical Skills

Languages: C, C++, Python, Java, HTML, CSS, Typescript, NextJS, ReactJS

Cloud Tools: AWS GUI, AWS CLI

Concepts & Frameworks: OOPs, Java Swing, File I/O, Collections, Exception Handling

Databases: MySQL, MongoDB, PostgreSQL

Tools: Git, GitHub, Command Line, Visual Studio Code, Google Colab, Cisco Packet Tracer

Certifications

OCI Certified Multicloud Architect Professional – Oracle University | Online | Sep 2025 [[Link](#)]

AWS Certified Cloud Practitioner – Certification Course via GeeksForGeeks | Online | Sep- 2025 [[Link](#)]

Professional Engagements

– Core Technical Committee Member – UPES Cloud Security Alliance (CSA) Student Chapter

– Attendee at AWS Community Day, Dehradun. Engaged with industry experts and AWS user groups, gaining exposure to enterprise cloud adoption, security practices, and GenAI + AWS.

– Regular Hackathon Participant - Gained hands-on experience in agile development, rapid prototyping, and practical problem-solving. Built and deployed 3 major applications - TransparaScore (Explainable AI for credit risk under IIT Kanpur CredTech), Zyra (AI career mentor under Google Cloud and Hack2Skill), and Saarya Health for All (healthcare accessibility platform under Smart India Hackathon), showcasing expertise in AI, cloud, and full-stack development.