

Aarab Nishchal

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Software Engineer with demonstrated experience in full-stack development and applied machine learning. Proficient in building scalable applications and AI-driven tools with a strong foundation in Python, C++, and modern JavaScript frameworks.

Education

Kalinga Institute of Industrial Technology

2022 – 2026

Bachelor of Technology in Computer Science

Relevant Coursework: Data Structures & Algorithms, System Design, Machine Learning

Experience

Technical Developer Intern, Unstop

Sep 2024 - Present

- Developed and curated **6-12 daily coding challenges** using Python and Java for Unstop's technical hiring platform, supporting recruitment drives for multiple high-growth tech partners.
- Diagnosed and resolved over **400 data integrity bugs** in existing problem sets within a 2-week sprint, collaborating with backend engineers to improve platform reliability by an estimated **15%**.
- Enhanced and refactored existing technical assessments, improving the overall quality and accuracy of content used in nationwide hiring campaigns.

Projects

Orphia - AI-Powered Music Generator

[GitHub]

- Engineered a full-stack AI music generation application by integrating **Meta's MusicGen** model with a custom-trained **LSTM model**, enabling users to create personalized music from text prompts.
- Developed a responsive and intuitive user interface with **Next.js** and Tailwind CSS, resulting in a **25% improvement in user retention** during initial testing phases.
- Tech Stack:** Next.js, Python, PyTorch, Hugging Face, LSTM, Vercel.

CppTest GenAI - AI-Powered C++ Unit Test Generator

[GitHub]

- Developed a generative AI tool that automates C++ unit test creation by parsing .cpp and .h source files and using a fine-tuned **LLaMA model** to generate relevant test cases.
- Reduced manual unit testing time by an estimated **80%** for sample codebases, accelerating the development lifecycle and improving test coverage accuracy.
- Tech Stack:** Python, C++, LLaMA, Transformers, NLP, Git.

Personal Portfolio Website

[GitHub]

- Designed and built a high-performance personal portfolio achieving a **Google PageSpeed score of 83** by implementing server-side rendering (SSR) and advanced SEO techniques.
- Tech Stack:** Next.js, React, Framer Motion, Tailwind CSS, Vercel, SEO.

Certifications

- Data Science Professional Certificate** - IBM
- Scientific Computing with Python** - freeCodeCamp
- AMCAT Certified:** Data Processing Specialist, Software Development Trainee

Skills

Languages

Python, Java, C++, JavaScript, TypeScript, SQL

Frameworks & Libraries

React, Next.js, Node.js, Express, PyTorch, Hugging Face, Tailwind CSS

Databases

MongoDB, PostgreSQL, MySQL, Firebase

Tools & Platforms

Git, GitHub, Docker, Kubernetes, CI/CD, Jest, Postman, Vercel, Netlify

Concepts

Data Structures, Algorithms, System Design, REST APIs, Machine Learning, NLP