

Nikky Amresh

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SUMMARY

SDE 2 at Educational Initiatives (Mindspark), building backend for an adaptive learning platform used by 500,000+ students globally. 4+ years of full-time experience across Mindspark, Wing Assistant, and HackerEarth, plus earlier internships at multiple companies. Strong in Node.js/TypeScript, microservices, and performance work (cut QT report generation by 86%). Recently spent time embedding AI into dev workflows - MCP servers for Jira triage, PR review, and Confluence ops. Shipped a VS Code extension live on the marketplace. Portfolio spans full-stack AI, C++ UE5 plugins, and multi-service orchestration pipelines.

WORK EXPERIENCE

Educational Initiatives (Mindspark) - SDE 2, Platforms Engineering

Bangalore, India · Full-time · Hybrid

Dec 2023 - Present

Platform backend team supporting Mindspark, an adaptive learning product used by 500,000+ students globally.

- Promoted to SDE 2 (Platforms Engineering), effective July 2025.
- Owned backend for Computational Thinking product (Amazon Feature Engineering partnership); shipped features to 100,000+ students.
- Optimized QT report generation from 2m 16s → 18.9s (86% reduction) via backend refactoring.
- Built MCP (Model Context Protocol) automation servers for Jira triage, PR review/comments, commit analysis, and Confluence AI integrations - embedded AI into core dev workflow.
- Designed and shipped MCP Mindspark Control Panel: auto school code generation, demo tagging, CT-org mapping, and order/org lifecycle management.
- Built Mira Platform microservices (auth APIs, SMS notifications, approval workflows, event scheduling) with a common error-handling framework; designed Pre-Post Assessment System with impact tracking and permission handling.

Stack: PHP, MongoDB, LAMP, TypeScript, Node.js, AWS (EC2, S3), Docker, Microservices Architecture

Wing Assistant - PHP Developer

California, United States · Remote

Jun 2023 - Dec 2023

- Built real-time group and personal chat application for two web portals with scalable architecture and optimized database structures for low-latency delivery.
- Resolved Sentry monitoring issues and optimized backend performance.
- Implemented Pipedrive CRM integration and secure webhook integrations for inter-system communication.

Stack: PHP, JavaScript, MySQL, MongoDB, Docker, Sentry, Pipedrive

HackerEarth - Full Stack Engineer

Bangalore, India · Hybrid

Apr 2022 - May 2023

- Built 40+ full-stack projects across Django, Laravel, MERN, MEVN, Express, TypeScript, and Ruby on Rails for the technical assessment platform.
- Created 20+ DevOps scenarios to evaluate Docker, Linux, and Bash skills.
- Led Knowledge Transfer sessions; assessed candidates' technical depth and problem-solving ability.

Stack: Django, Laravel, MERN, MEVN, Express, TypeScript, RoR, Docker, Linux, Bash

Gramoday - Back End Developer (Internship)

Noida, India · Remote

Sep 2021 - Dec 2021

- Developed REST APIs using Express.js, MongoDB, and TypeScript for a mobile application.
- Built Bitbucket CI/CD pipelines and AWS S3 deployment scripts for Angular applications.

Stack: Node.js, TypeScript, MongoDB, Docker, Bitbucket, AWS S3

Fotonicia - Software Engineer (Internship)

New Delhi, India · Remote

Sep 2019 - Jul 2021

Remote role with full-time scope - worked directly with customers on Magento-based e-commerce products.

- Built Magento PHP plugins, paywall modules, and marketplace features for customer-facing e-commerce sites.
- Led MEVN stack implementation; built RESTful APIs and CI/CD pipelines on AWS; automated ops with Python.

Stack: PHP (Magento), Python, Node.js, Vue.js, MySQL, Firebase, AWS, Linux, Shell Scripting

FEATURED PROJECTS

Astra - Personal AI Task Manager

Built because generic task apps didn't fit my workflow. Parses plain English into structured tasks, auto-links tasks/people/goals into a knowledge graph, runs fully local. I use it daily.

Stack: Node.js, TypeScript, SQLite + FTS5, Groq/Claude, Google Calendar/Tasks, Vue.js

- NLP parses "prep quarterly review for team by Friday EOD" into a task with priority, due date, linked people
- Knowledge graph auto-links tasks to people, goals, past interactions; FTS5 full-text search across everything
- Bi-directional Google Calendar + Tasks sync via OAuth; local-first SQLite, no cloud

GitHub: <https://github.com/NikkyAmresh/astra>

LeetCode Practice Extension - Live on VS Code Marketplace

Wanted to practice LeetCode without leaving the editor. Shipped to the marketplace; I use it for my own prep.

Stack: TypeScript, VS Code API, LeetCode API, Firestore, Chrome Extension

- 40+ commands: run, submit, study plans, interview mode, focus mode, AI explain/analyze
- Firestore cloud sync for progress across machines; custom file formats (.leetcode, .lcinterview, .lcireport, .hint) with custom editors
- Chrome extension companion for one-click "open in VS Code" from leetcode.com; interview mode with timed problems and auto-generated reports

GitHub: <https://github.com/NikkyAmresh/lcex>

Database & Developer Tools - VS Code Extensions

Several VS Code extensions for database-heavy workflows. The fun part was pushing the custom editor API for SQL panels, package inspectors, and JWT tools that feel native inside VS Code.

Stack: TypeScript, VS Code API, PostgreSQL, sql.js, webviews

- Custom editors for config files, package manifests, SQL runners, JWT inspectors
- PostgreSQL client with connection switching (dev/staging/prod); SQL panel with inline results, Ctrl+Enter to run
- Package integrity checker with sync-status preview; custom file icons and syntax highlighting

GitHub: <https://github.com/NikkyAmresh/mext>

Storyboard - AI Comic & Video Pipeline

5-stage pipeline that turns a story prompt into an illustrated comic with narration and a final video. The interesting part was keeping state consistent across ComfyUI, FFmpeg, LLM APIs, and Instagram's Graph API.

Stack: Node.js, Express + SSE, ComfyUI, FFmpeg, Groq/Claude/Ollama, Meta Graph API v21, SQLite

- Dynamic ComfyUI workflow patching - inject node IDs into JSON templates at runtime
- Pipeline: story → scene breakdown → character portraits → panel composition → captions/TTS → video composition
- Multi-workflow support (FLUX, FLUX-Pulid, animate-anything); Instagram publishing; SQLite prompt library

GitHub: <https://github.com/NikkyAmresh/nodeimg>

WorldBuilder - UE5 Procedural World Plugin (C++)

Fell down a rabbit hole learning procedural generation in Unreal. C++ editor plugin for click-to-create road networks with auto-junctions, snapping, and a building generation system.

Stack: C++, Unreal Engine 5, spline-based mesh generation, dynamic mesh, Python

- Point Capture Tool - click in the viewport to place, extend, split, or join roads interactively
- Procedural spline-based road mesh with dynamically generated junctions; smart snapping within tolerance
- Multiple road types (flyover, tunnel, city, countryside); building generation in spline/polygon/area modes with preset system

GitHub: <https://github.com/NikkyAmresh/WorldBuilder>

Algolify - VS Code extension for interactive DSA lessons with a custom .algolify format; serves lessons locally, in-page AI chat. *TypeScript, VS Code API.*

VehicleAIPlan - Scenario visualization for autonomous vehicle decision-making; interactive Mermaid flowcharts, Firebase-hosted. *Vite, JavaScript, Mermaid.*

EDUCATION

B.Tech, Computer Science Engineering

Roorkee Institute of Technology, Uttarakhand · 2019 - 2023 · 8.8 CGPA

ACHIEVEMENTS

- SIH 2022 Grand Finale - Built Verifi, an offline OTP authentication solution for DRDO.
- NECTF Organizer - International cybersecurity CTF with 400+ participants from 25+ countries.
- Chess: Regional-level player.

SKILLS

Languages: JavaScript, TypeScript, Python, PHP, C++

Backend: Node.js, Express.js, FastAPI, Flask, PHP

Databases: MySQL, PostgreSQL, MongoDB, Firebase, SQLite + FTS5

Architecture: Microservices, Event-Driven, API Design, Real-Time Systems (WebSockets, WebRTC, HLS)

Cloud & DevOps: AWS (EC2, S3, Lambda), Docker, Linux, CI/CD (Bitbucket, GitHub Actions)

AI/LLM: Groq, Claude, OpenAI, LangChain, Vector Databases

Frontend: React.js, Vue.js, HTML5, CSS3

Tools: Git, Jira, Sentry, GitHub Copilot