

# NIDHEESH TK

Software Engineer

[github.com/nidhitk](https://github.com/nidhitk) | [candidates.intervues.club/u/nidheesh-tk](https://candidates.intervues.club/u/nidheesh-tk)

## SUMMARY

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Software Engineer with experience in backend development, QA testing, and AI/ML applications. Proficient in Python, FastAPI, PostgreSQL, and REST API design alongside hands-on expertise in LangChain, LangGraph, and RAG architectures. Proven track record of developing microservices, executing comprehensive API and regression testing, and engineering robust Machine Learning models.

## EXPERIENCE

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### Software Engineer

Kireap India Technologies Pvt. Ltd.

Aug 2025 – Jul 2026

- Developed and maintained FastAPI backend microservices and REST APIs, implementing business logic, request validation, and error handling with PostgreSQL persistence.
- Engineered and executed 70+ test cases across complex real-time pricing algorithm scenarios (OPA), conducting functional, regression, integration, and API testing using Postman and SQL in an Agile framework.
- Resolved production issues by performing root cause analysis across API, service, and database layers.

### Software Engineer

KIREAP

Aug 2025 – Jul 2026

- Executed functional, regression, API, and application testing for core software modules.
- Transitioned into backend engineering to deliver Python, FastAPI, and PostgreSQL microservices and production bug fixes.
- Built exposure to LangChain, LangGraph, LLMs, RAG, and Agentic AI workflows to develop AI-based applications.

### Software Engineer

Kireap India Technologies Pvt. Ltd.

May 2025 – Jul 2025

- Developed and maintained FastAPI backend microservices and REST APIs, implementing business logic, request validation, and error handling with PostgreSQL persistence.
- Engineered and executed 70+ test cases across complex real-time pricing algorithm scenarios (OPA), conducting functional, regression, integration, and API testing using Postman and SQL in an Agile framework.
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### Software Engineer

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May 2025 – Jul 2025

- Executed functional, regression, API, and application testing for core software modules.
- Transitioned into backend engineering to deliver Python, FastAPI, and PostgreSQL microservices and production bug fixes.
- Built exposure to LangChain, LangGraph, LLMs, RAG, and Agentic AI workflows to develop AI-based applications.

### Intern

National Institute of Technology Calicut

Jun 2024 – Jun 2024

- Interned in Artificial Intelligence and Machine Learning under Dr. Ameer P M.
- Built an EfficientNet-based binary classification model to distinguish benign vs. malignant melanoma lesions — 91.45% validation accuracy on a 10K+ image dataset.
- Evaluated model robustness against adversarial attacks (BIM, PGD via Torchattacks), with accuracy dropping to 73.79% under BIM attack, and implemented an SVD-based defense mechanism.

### AI/ML Intern – Classification & Adversarial Robustness

NIT Calicut

Jun 2024 – Jun 2024

- Developed EfficientNet-B0 binary and multiclass melanoma classifiers using PyTorch on datasets up to 35,331 images, achieving up to 91.45% validation accuracy.
- Evaluated classification model vulnerability against BIM and PGD adversarial attacks using Torchattacks.
- Implemented an SVD-based defense mechanism to mitigate accuracy degradation under adversarial conditions.

### Intern

CUSAT FAB Lab

Feb 2023 – Sep 2023

## EDUCATION

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School of Engineering, CUSAT · Bachelor of Technology · 2021 – 2025

## SKILLS

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Languages and Frameworks: HTML, Java, JavaScript, Jupyter Notebook, Python, SQL, FastAPI, LangChain, LangGraph, Pydantic, PyTorch, React, scikit-learn, Spring Boot, Transformers

Databases: PostgreSQL, Qdrant, Redis

Tools: Amazon EC2, Docker, Git, GitHub, Groq, Kafka, Linux, MCP, Postman, RAG, REST API Design, Torchattacks

## PROJECTS

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### Agentic Code Editor

LangGraph, Python, AST, LLM Constructed an interactive CLI code-editing agent utilizing a multi-stage LangGraph pipeline to convert natural-language requirements into functional code modifications.

LangGraph, Python, AST, LLM

### RAG Documentation Assistant

FastAPI, Qdrant, Groq, BM25, Cross-Encoder Reranking, Sentence-Transformers, Docker Compose Architected a FastAPI RAG service to ingest documents, compute vector embeddings using Sentence-Transformers, and manage semantic search with a Qdrant vector store.

FastAPI, Qdrant, Groq, BM25, Cross-Encoder Reranking, Sentence-Transformers, Docker Compose

### CreditWise – Loan Approval Prediction

Python, scikit-learn, KNN, Logistic Regression, Naive Bayes Built an end-to-end supervised machine learning pipeline to predict loan approvals, benchmarking KNN, Logistic Regression, and Naive Bayes models on financial datasets.

Python, scikit-learn, KNN, Logistic Regression, Naive Bayes

Additional projects: T5 Text Summarizer, EfficientNet-based Binary Classification Model for Melanoma Lesions

## AWARDS

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Solved 80+ Data Structures & Algorithms problems on LeetCode, Java Data Structures and Algorithms – Udemy, AWS SimuLearn – Cloud Practitioner (Training Badge), Java Data Structures & Algorithms + LEETCODE Exercises Certification, Robotics Workshop – IIT Madras Certification, AWS SimuLearn - Cloud Practitioner - Training Badge Certification, SCI KNO TECH Workshop - STREAM Ecosystem Mentor Certification