

# NIRMAL KHEDKAR

Software Engineer and Cloud Enthusiast

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## EDUCATION

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**University of Colorado - Boulder**  
Master of Science - Computer Science

*Aug 2024 - Ongoing*

**National Institute of Technology Karnataka**  
Bachelor of Technology - Information Technology

*July 2018 - May 2022*

## ACADEMIC ACHIEVEMENTS

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**Vehicle Re-identification Using Convolutional Neural Network**

Jan 2023

*Research Paper - ICADCML 2023*

The paper describes the usage of convolutional neural networks with vision-based techniques to accurately identify vehicles across multiple cameras without being dependent on their number plates.

**NIT Conclave 2019**

Hackathon

*2nd Position for College*

I participated in the hackathon team, developing a full-stack social network platform tailored to connect researchers and facilitate collaboration.

## PROFESSIONAL EXPERIENCE

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**Visa Inc.**

June 2022 - July 2024

*Software Engineer*

- Migrated Springboot services to asynchronous Reactor architecture for significant performance improvements. Also handled all security, test, infra and deployment issues for the release of these components in internal test environments and production.
- Proactive in handling unpredictable client and production errors, ensuring system stability and uptime.
- Introduced test coverage practices and end-to-end Jenkins pipelines, improving engineering practices at my team and reducing development time by 45%.

**Visa Inc.**

May 2021 - July 2021

*Software Engineer Intern*

- Analyzed several data points within the Visa Developer Platform ecosystem to gather data on route, API, product and client levels.
- Merged the said data into a single backend service and developed a frontend portal for querying. - The product became the base for dynamic throttling and load prediction projects at Visa.

**Twizzr.com**

Oct 2019 - May 2022

*Tech Lead (part-time)*

- Brainstormed business requirements, design plans and translated and refactored code for scalability and future compatibility.
- Implemented linters, automated version bumps and CI-CD pipelines for enhanced development experience and code quality. Additionally, I introduced customer engagement tools like chatbots and analytics for proactive error resolution and insights into customer experience.

## TECHNICAL STRENGTHS

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<b>Languages</b>	Java, Javascript, MySQL, MongoDB, C/C++, Python, GraphQL
<b>Frameworks</b>	Springboot, Mockito, Project Reactor, MEAN/ MERN, Android, Typescript, React Native, Gatsby, Rails, NextJS, NestJS, R2DBC, WebVR
<b>Tools</b>	Google Cloud, Jenkins CI, Kubernetes, Prometheus, Tableau, Sentry, Linux, Generative AI

## PROJECTS

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**AR Visualization of Human Anatomy** WebVR, Javascript  
Created a human anatomy learning system using augmented reality technology and human-computer interaction principles. We also evaluate the application's usefulness by testing it with an audience to understand its effectiveness for learning and understanding.

**Farm-fresh E-Commerce Portal** MERN, Javascript  
Built a full-stack website for farmers to sell produce directly to consumers, without mediators, thus increasing farmers' income and reducing the market prices.

**Reference based Image Colorization** Computer Vision, Colorization  
Studied and built a model that can efficiently colorize an entire sketch without continuous user intervention.

## VOLUNTEERING ROLES

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**Integrated Resources and Information Technology (IRIS), NITK** July 2019 - May 2022  
*Frontend Advisor and Web Developer* *NITK Surathkal*  
- I worked for IRIS in its Web Development Team, contributing to design upgrades, feature enhancements and supporting production fixes.  
- Contributed towards improving Admission Modules and major design improvements for CEMS, CDC, and Profile Module.

**The Institute of Engineering & Technology, NITK** May 2020 - May 2022  
*Webmaster* *NITK Surathkal*  
- Redesigned IET NITK website from scratch to detail activities done by the group.  
- Integrated this website to a content management system, simplifying web content maintenance.  
- Streamlined several manual, unorganized processes onto the website, increasing group participation.