

# Prateek Tripathi

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## Summary

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Recent Computer Engineering graduate with hands-on experience in full-stack development, DevOps, and AI/ML. As a Junior Research Fellow at NIT Raipur, I've built scalable automation systems for finance, civic services, and metallurgy—leveraging Express.js, Next.js, Docker, Kubernetes, AWS, Kafka, BERT, YOLO, and image segmentation.

## Education

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**Sinhgad Academy of Engineering, Pune**  
*B.E. in Computer Engineering*

*June 2020 – June 2024*

**GPA:** 8.36 / 10.0

**Coursework:** Computer Architecture, Data Structures and Algorithms (DSA), Machine Learning & AI, Operating Systems, Database Management Systems (DBMS), Theory of Computation, Software Engineering, Computer Networks

## Experience

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**Programmer (Junior Research Fellow (JRF))**  
*National Institute of Technology (NIT) Raipur*

*Raipur, India*  
*Aug 2024 – Present*

- Spearheading automation for Chartered Accountants and Bookkeepers to reduce manual entry, simplify GST filing, and streamline taxation.
- Implemented a chatbot-supported system using Express.js, Next.js, Kafka, Docker, Kubernetes, and AWS (EC2, S3).
- Ensured platform scalability and compliance through secure, cloud-native architecture

**Software Engineer Intern**  
*InternPe*

*Pune, India*  
*Mar 2023 – April 2023*

- Contributed to the development of a web-based Airline Reservation System during a remote internship.
- Focused on building responsive and user-friendly UI components using HTML, CSS, and JavaScript.
- Ensured a smooth user experience by implementing real-time booking interfaces and validation workflows.
- Collaborated with the backend team to integrate API endpoints for dynamic flight listings and reservation status.

## Projects

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**Fintech Automation System(FINAGER)**

- A full-stack automation suite with chatbot-enabled GST filing and tax optimization.
- Tech stack: Next.js, Express.js, Kafka, AWS (EC2, S3), Docker, Kubernetes.

**Ticketing Raise System – Bhilai Steel Plant**

- Intelligent ticket routing using BERT NLP to auto-assign complaints to relevant departments.
- Tech stack: Express.js, Next.js, Python, BERT (NLP model).

**Swachhta App – Nagar Nigam Raipur**

- A React Native app for civic cleanliness monitoring using YOLO for real-time detection and reporting
- Tools Used: React-Native, Next.js, Express.js, Python, YOLO, AWS

**AI-Based Metallurgical Detection System**

- Developed a web application for defect detection in materials via binary image segmentation.

- Tech Stacks : Next.js, Express.js, MongoDB, JWT, AI integration.

## Skills

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**Languages:** Java,C++,C,DSA, SQL, TypeScript

**Technologies:**

**Frontend:** HTML, CSS, JavaScript, React, Next.js

**Backend:** Node.js, Express.js, MongoDB, SQL

**DevOps:** Docker, Kubernetes, GitHub Actions

**Cloud:** AWS (EC2, S3, Lambda), Firebase

**AI/ML:** BERT, YOLO, Image Segmentation, Python

**Other Tools:** Kafka, JWT, Postman, Git, Nginx

**Soft Skills:** Leadership, Agile collaboration, Public Speaking