

Yash Singh Pathania

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PROFILE

Dedicated Software Engineer with over 3 years of professional experience specializing in Ruby on Rails development. Proven track record in building scalable applications, optimizing system performance, and leading teams to deliver high-impact projects. Seeking a full-time role to contribute technical expertise in Ruby and full-stack development to innovative products.

WORK EXPERIENCE

Tata 1mg, Delhi, India

ROR Development Engineer | Jul 2022 – Jul 2024

- **Developed Common Order Taking (COT) and POS System**
 - Led the end-to-end development of the COT and an in-house POS system using **Ruby on Rails**, servicing over **70+ retail stores** and processing **€34,000 in daily orders**. Our team received the **"Team of the Quarter"** award for this achievement.
- **Ruby and Rails Upgrade with YJIT Integration**
 - Spearheaded the upgrade from **Ruby 2.6 to 3.2** and **Rails 5 to 7**, integrating **YJIT** to enhance system performance and scalability by 30%. This initiative modernized the tech stack, leading to faster deployment cycles and improved developer productivity.
 - Led to the deprecation of maintaining separate Gemfile.lock files for JRuby and CRuby branches, simplifying dependency management and streamlining the development process
- **Migration from Octopus to ActiveRecord for Sharding**
 - Successfully migrated the database sharding mechanism from Octopus gem to ActiveRecord::Relation, simplifying the codebase and reducing data retrieval times by 25%. Developed multiple product features for a Ruby on Rails application, involving sophisticated controller models, wrappers, and enhancements such as advanced controllers, custom serializers for optimized JSON handling, robust filters and procs for efficient data querying, dynamic pagination models for scalable data presentation, seamless database migrations for consistent schema updates, and secure authentication mechanisms to ensure robust access control and data security.

Tata 1mg, Delhi, India

Software Developer Intern | Jan 2022 – Jun 2022

- **Comprehensive Unit Test Suite Development**
 - Directed the development of a unit test suite achieving **70% code coverage** on a codebase exceeding 7,000 lines, utilizing **RSpec** and **Shoulda Matchers**. This significantly improved application reliability and eased future integrations.
- Received an **A+ for outstanding performance** during the industry internship, which translated into a pre-placement offer.

Sketch Bytes, Port Blair, India

Software Developer Intern | Apr 2020 – Apr 2021

- Developed an intranet-based inventory management system using Flask, PostgreSQL, and Redis to optimize resource utilization across 7 hospitals, **supporting over 7,000 COVID patients**.
- Engineered user history and inventory modules, improving visibility and resource allocation in regions without internet access

EDUCATION

University College Dublin, Dublin, Ireland

MSc Computer Science (Negotiated Learning) | Sep 2024 – Jul 2025

- **Relevant Coursework:** Distributed Systems, Machine Learning, Web Development, Software Engineering Principles, Data Structures and Algorithms.

Thapar Institute of Engineering and Technology, India

BE Computer Science with Minors in Data Science | Jul 2018 – Jul 2022

Bachelor Of Engineering. in Computer Science, – Upper FirstClass Honors

SKILLS

Programming Languages: Ruby, Python, C++

Web Development: Ruby on Rails, React, Django, FastAPI, Sanic

Databases: MySQL, PostgreSQL, MongoDB

DevOps: Docker, Kubernetes, AWS, Infrastructure as Code, Sidekiq

Tools: Redis, Podman, PlantUML

Testing Frameworks: RSpec, Shoulda Matchers

Methodologies: Agile Development, Continuous Integration/Continuous Deployment (CI/CD), Unit Testing

Version Control: Git, GitHub

CERTIFICATES

Infosys Certified Software Programmer : Demonstrated excellence in software development principles.

Top 100 in codechef smackdown: Problem-solving skills in a global competitive programming contest.

AI Certification from University Of Helsinki: Solidified knowledge in Artificial Intelligence concepts.

PROJECTS

Detecting Emotions of Tweets Using Machine Learning and Deep Learning Technique, *Research Paper*

- Analyzed the SemEval Data Set for vernaculars and emoticons in python.
- Explored BERT and convolutional neural networks for advanced text analysis.

Tech Stack Upgrade

- Directed a comprehensive tech stack overhaul at Tata 1mg, leading the upgrade of Ruby from 2.6 to 3.2 (YJIT) and Rails from version 5 to 7. Consolidated two branches—C-Ruby and J-Ruby—into one, enabling the shift from individual EC2 containers to Kubernetes. This transition reduced release times from 60 minutes on separate machines to just 15 minutes in a unified deployment, significantly improving backend efficiency.

Avo Hq. Open source Contributions(ROR)

- Enhanced the **Avo** framework by enabling global method overrides and custom methods via **Avo::BaseResource**.

HOBBIES

Basketball | Hiking | Certified Scuba Instructor — UCD dive club | Debating | Cooking