

Saurabh Chauhan

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• <https://saurabh-chauhan22.github.io/portfolio.github.io/>

Software Engineer

Master's Student in Computer Science with 3 years of experience, specialized in AI-ML, backend development, and automation. Proven skills in machine learning, Java, and cloud computing. Enhanced system efficiency and accuracy, achieving a 30% improvement in model performance within months. Adept at driving projects from conception to completion.

SKILLS

Languages: Python, Java, R, C++, Grpc (Proto3)

Web Frameworks & Tools: Django, Flask, Springboot, Apache API SIX (API Gateway), FastApi, Automation Testing (RPA), Apache Superset, Airflow, jQuery, JavaScript, ELT, Docker, Jenkins CI/CD

Cloud & Version Control: GCP, AWS EC2, Apache Spark, Git, SVN (Subversion)

AI-ML: TensorFlow, PyTorch, Keras, LLMs, CNN, ANN, Scikit-learn, Spacy, Generative AI, Retrieval Augmented Generation, NLTK, Lang Chain, Pandas

Database: SQL Server, Oracle, SQLAlchemy, PostgreSQL, Redis

WORK EXPERIENCE

Product Dossier Solutions Pvt Ltd • Pune, India • 06/2023 - 07/2024 Software

Engineer (AI-ML)

- Architected an innovative backend package that improved code reusability to 85%, streamlining future development efforts while facilitating faster deployment cycles with measurable time savings of approximately 10 hours per week.
- Individually developed AI backend package and architecture which reduced code reusability to 85%.
- Created and deployed machine learning models utilizing Spacy, improving text classification accuracy by 30% and enabling real-time detection and extraction of form fields.
- Built & implemented scalable distributed computing systems using AWS EC2 and GCP for high-performance automation system.
- Composed automation software solutions using Core Java and Docker, reducing deployment times by 60%.
- Collaborated with software engineers and data scientists and drove initiatives to monitor and evaluate the performance of machine learning integrations, implementing real-time analytics that provided actionable insights and increased model accuracy by 20%.
- Built an automation software-based solution in Core Java utilizing Docker, Apache Freemarker which reduced deployment time of software by 60%.
- Integrated Apache API SIX gateway (Front-end proxy and Load balancer) into a spring boot application to manage GRPC APIs of AI services for client increasing customization of API and security up to 80%.
- Deployed microservices ELT to AWS EC2, optimizing performance and scalability.
- Spearheaded the development and implementation of a Retrieval Augmented Generation system utilizing Lang Chain (v2.0) with OpenAI and Mistral 7B model, enhancing document text extraction efficiency by 40% through prompt engineering.

Dasha Krit Technology Pvt Ltd (D10X) • Pune, India • 05/2021 - 04/2023

Software Engineer

- Programmed a Django SAAS multi-tenant workflow application from scratch to version 1.1, contributing 70% to the project. Led the project and coordinated individually with team members, creating, and assigning tasks to ensure timely delivery of the product.
- Enhanced shell scripts to automate software deployments and to run automation testing suite on client Linux servers.
- Engineered an automated solution with Python for precise extraction of live data from a WebSocket API; integrated daily updates into the database via SQLAlchemy, drastically improving data availability and accuracy.
- Integrated Apache Superset into a stock market application, enhancing user experience by enabling real-time data exploration and visualization; facilitated informed investment decisions for over 500 active users.
- Streamlined automated testing frameworks with Python Playwright (Robot Framework) that decreased manual QA efforts by over 35% while ensuring code quality remained high, leading to faster rollouts of new features.
- Pioneered a fin-tech product base architecture of the project and the database structure, integrating third-party APIs and WebSocket.

EDUCATION

Master of Science in Computer Science in Computer Science

University of Illinois • Springfield, Illinois

Bachelors of Engineering in Computer Science in Computer Science

Pune University • Pune, Maharashtra, India

PROJECTS

Invoice IQ

- Developed and integrated an end-to-end information extraction pipeline for invoices, incorporating GPU-accelerated OCR and a transformer-based NER model.
- Trained and fine-tuned the NER model on annotated data to accurately identify and retrieve key invoice fields.
- Significantly improved efficiency and reliability in invoice processing, streamlining data workflows and reducing manual labor.
- With a 95% accuracy rate, the model detected 6-7 entities out of 8 entities from the uploaded invoice by the user.
- Tech Stack/Libraries: Docker, Doccano, Spacy, Tkinter

Neural Models

- Experimented with and implemented a single-layer perceptron model from the ground up, achieving an approximate accuracy range of 82-88%.
- Developed and trained a three-hidden-layer multi-layer perceptron (MLP) model for diabetes prediction, leveraging a more complex neural network architecture to improve classification performance

VOLUNTEERING & LEADERSHIP

Rotaract Club of University of Illinois, Springfield • 10/2024 - Present

Public Relations Officer/Social Media Manager

- Manage all the public & social events of the University organized by the club. Handle all the social media platforms like Instagram, Facebook, YouTube.

Rotaract Club of DYPVP • 08/2019 - 04/2020

Public Relations Officer

- Managed and optimized social media platforms (Instagram, Twitter, Facebook), successfully growing the follower base to over 1,000.
- Served as the primary point of contact for media inquiries and public relations matters, ensuring clear and timely communication with the public and Rotary members.
- Executed a series of well-organized social and online activities like cooking competition, food distribution and blood donation drives.

Engaged into a 12-hr. hackathon building a project with Django and REST Framework. • 08/2015 - 11/2017

Lead Team into Hackathon

Universal Science Academy - Coaching Center • 08/2015 - 11/2017

Coordinator and Teacher

Team member

Google Summer of Code 2022 program