

SHIVPOOJAN SAINI

Senior Research Engineer | AI & GenAI Specialist | Cloud-native Innovator



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WORK EXPERIENCE

Senior Research Engineer (full time) Noida

Insurance Samadhan

01/2024 - Present
[Achievements/Tasks](#)

Leveraged cutting-edge AI/ML technologies to lead the development of a product feature named 'KYP.' This initiative, founded on advanced artificial intelligence principles, significantly reduced human effort and automated various processes within the organization, enhancing efficiency and productivity.

Research Engineer (full time) Noida

Insurance Samadhan

01/2023 - 12/2023
[Achievements/Tasks](#)

Working on the project called InSa Engine which can process the document and extract the information. It can take images and do the data extraction and fetch out key information.

Research Engineer (full time) Hydrabad

Eigenlytics Data Solutions

05/2022 - 12/2022,
[Achievements/Tasks](#)

Working in various research fields to develop Fintech solution-based products with technical, team management and leadership skills.

Associate Data Scientist (Full time) Hydrabad

Eigenlytics Data Solutions

07/2021 - 04/2022
[Achievements/Tasks](#)

Worked in various fields of artificial intelligence which include computer vision, Machine Learning, deep learning, and Natural language processing. Developed many algorithms for FinTech software along with their end-to-end deployment over the cloud.

Data Science Research Intern Bangalore

Eigenlytics Data Solutions

01/2021 - 06/2021
[Achievements/Tasks](#)

During my internship, I developed an OCR system from scratch that contains various components based on different artificial intelligent technologies, I also developed an automated system which is able to take decisions according to inputted data. I also developed face recognition and various others object detection models.

SKILLS

- **Generative AI & Agentic Systems:** Prompt Engineering, LLM fine-tuning (GPT, LLaMA, FLAN), Retrieval-Augmented Generation (RAG), Agentic Workflows, LangChain
- **NLP & LLMs:** Transformers, BERT, GPT-series models, spaCy, seq-to-seq modelling, multilingual NLP, rule-based and statistical NLP
- **Computer Vision:** OCR/ICR, image segmentation, face/object recognition, OpenCV, Detectron2, YOLO-based systems
- **Machine & Deep Learning:** Supervised/Unsupervised/Reinforcement learning, model training, tuning, optimization, distributed computing (multi-GPU setups)
- **AI Frameworks & Libraries:** LangChain, PyTorch, TensorFlow, Keras, HuggingFace Transformers, scikit-learn, Pillow, FastAPI
- **Cloud-Native AI:** AWS: SageMaker, Bedrock, EC2 GPU, Lambda functions GCP: Vertex AI, Compute Engine
- **AI Deployment & Automation:** Docker containerization, RESTful APIs, Flask, Streamlit, real-time model serving, end-to-end AI pipelines, ML Ops, monitoring and logging
- **Programming:** Python (advanced), C/C++, Embedded C, Shell/Bash scripting
- **Data Analysis & Visualization:** Pandas, NumPy, Matplotlib, Seaborn, Plotly, Tableau (basic)

PROJECTS

KYP (Know your Policy) (01/2023 - Present)

Led the development of KYP, a cutting-edge AI tool leveraging Generative AI and Large Language Models (LLM) to analyze insurance documents. This innovative solution identifies essential data points, predicts claim rejection risks, and significantly improves accuracy and efficiency in risk assessment

Inquiry Assistant (06/2024 - Present)

This project leverages advanced Generative AI and LLM technologies to create a sophisticated inquiry assistant that interprets and responds to insurance policy queries based on contextual data, enhancing decision-making efficiency in the insurance domain

Analytical Board for Insurance Insight (12/2024 - Present)

This project leverages advanced Generative AI and LLM technologies to create a sophisticated inquiry assistant that interprets and responds to insurance policy queries based on contextual data, enhancing decision-making efficiency in the insurance domain

DocEye Multilingual OCR/ICR (05/2020 - 12/2022)

This advanced FinTech solution leverages cutting-edge AI, OCR, and OMR technologies to extract queries from unstructured and asymmetrical documents across multiple sectors. It provides dynamic, ready-to-deploy outputs for complex business challenges, enhancing operational efficiency and decision-making.

Image processing and Computer Vision Intern

Bangalore

Eigenlytics Data Solutions

05/2020 - 12/2020

[Achievements/Tasks](#)

During this duration, I worked on different modules based on Image processing and computer vision along with various Machine Learning algorithms. I developed a configuration- driven solution for query extraction from the various categories of unstructured data like Bank statements, Invoices, ITR and KYC etc., and developed Aadhar masking and suspect face recognition using Computer Vision, Deep Learning and Machine Learning.

Embedded System Intern Energy Cloud Technology

Surat

06/2019 -06/2019

[Achievements/Tasks](#)

Upgrade the experience of PCB designing with KI-CAD software, controller and sensors along with coding in C++ and MATLAB. I had also done a project on Smart Agriculture Monitoring with an Android app. This device measuresthetemperature, humidity, and soil moisture of plants, and these are shown in-app.

Marketing Intern

Jaipur

Haier Appliances (India) Pvt.Limited

12/2018 - 12/2018

[Achievements/Tasks](#)

I did Sales and Marketing with the management system, gaining fundamental management knowledge and exposure to a company hierarchy, which aided in understanding the key roles of various employees such as branch manager, logistic manager, financial manager, managing director, and so on. During field services, I met with different kinds of customers. I also explored the branch offices and got an idea of how the sales of the company vary with marketing.

EDUCATION

MS in Information Science (Specialization in ML)

The University of Arizona ,United States

07/2024 - 07/2026

B.Tech[Electronics & Communication Engineering]

Indian Institute Of Information Technology, Surat

07/2017 - 07/2021

PAPER PUBLICATION

- Introducing a Novel Approach for a Classifier Distinguishing Between Handwritten and Printed Words to Improve OCR Accuracy, Submitted to the 21st International Conference on Image Analysis and Processing.

Translation & Transliteration Hub (02/2022-03/2023)

Utilizing a sophisticated Transformer-based Autoencoder and advanced Unicode techniques, this project streamlines Hindi to English translation and transliteration, enabling refined NLP applications on Hindi texts to elevate further linguistic processing and analysis

KYC Data Extraction-NLP (05/2020-12/2022)

Using Object Detection algorithms, dynamic ROI are detected and GNN based relationship extraction between key and value. And Rule based Natural Language Processing is used to validate the fields. We currently have an accuracy of 80-85%.

Team Management & Leadership

Founding Member & AI/ML Team Lead:

Established and led the AI/ML team, driving strategic vision, fostering technical excellence, and building collaborative team culture.

Project Leadership:

Successfully managed multiple end-to-end AI initiatives, including flagship products (DocEye, KYP) and other impactful AI solutions, enhancing efficiency and operational effectiveness across domains.

Efficient Delivery & Problem-Solving:

Accelerated AI product launches through strategic planning, consistently meeting challenging timelines by systematically addressing complex problems with innovative, actionable solutions.

CERTIFICATES

- Visualizing Filters of a CNN using Tensorflow
- Deep Learning with PyTorch: Neural Style Transfer
- Computer Vision - Object Tracking with OpenCV and Python
- Artificial Intelligence in Indian Institute of Technology Bombay
- MyCaptain Internet of Things Workshop in January 2019
- Internet of Things [IoT] in Indian Institute of Technology (IIT) Delhi

ACHIEVEMENTS

E-cell IIIT Surat (08/2019 -07/2021)

Marketing Head of Entrepreneurship Cell of IIIT Surat

National Entrepreneurship Challenge (2019)

As in finalist in NEC 2019 from IIIT Surat

The Institution of Electronics and

Telecommunication Engineers IETE (02/2019 - 07/2021)

Member of IETE

LANGUAGES

English

(Full Professional Proficiency)

Hindi

(Native or Bilingual Proficiency)

INTERESTS

Tech enthusiast

Trekking

Adventure sports

Reading

Cultural Activities

Photography