

JORAWAR SINGH

Punjab, India • personal.jorawar@gmail.com • +91-6283013394 • linkedin.com/in/jorawar-singh-b67819173

PROFESSIONAL EXPERIENCE

SEISEI.AI (RGENAI TECHNOLOGY PVT LTD) (PRODUCT BASED).

Senior Machine Learning Engineer (Founding Engineer)

Rajasthan, India

May 2023 - Present

Led a six-person team at Seisei.ai (RgenAI Technology Private Limited), serving multiple clients and generating over **60 lakhs** in revenue within six months. Secured **50 lakhs** in funding from iCreate and an additional **1 crore** from investors.

Contributed to the company's growth through extensive research and development in GAN models

REALISTIC FACE VISUALLY DUBBING CONDITIONED ON AUDIO:

- created the visual dubbing model, DINET, conditioned on audio.
- Successfully optimized the model by converting it to ONNX and performing quantization, resulting in a 2.4x decrease in inference time.
- Further converted the model to TensorRT, achieving a 5.5x performance enhancement.

Pipeline for Productionizing PyTorch Model:

- Created a data loader technique to maximize GPU utilization to consistently greater than 90%, achieving 100% utilization.
- Boosted inference time, reducing it from 1.30 minutes to 10 seconds, resulting in considerable cost savings.

Leadership and Team Collaboration:

- Led a six-person vision team.
- Completed multiple client engagements successfully.
- Improved model performance and made significant strides in the vision pipeline.

INDIAVIDUAL LEARNING LIMITED (EMBIBE) (PRODUCT BASED)

Data scientist

Bengaluru, India

JUNE 2022 - march 2023

Enhanced Embibe's student doubt resolution system by integrating machine learning algorithms; delivered a 21% boost in resolution accuracy post-acquisition by Reliance.

Diagram Detection:

- Platform aimed at solving students' doubts.
- Users can upload doubts in the form of images, which are sent to a search pipeline divided into "Text search" and "Image search."
- Developed a pipeline to efficiently detect diagrams in images for relevant question searches in the image database.
- Increased the accuracy of doubt resolution by 21%.

Multiple Question Detection:

- Solves the issue of detecting multiple questions in user-uploaded images.
- Tested and fine-tuned various NLP, vision models, and multi-models to address this problem efficiently.
- Observed an increase in user feedback for doubt resolution, from 2.3 to 3.5 out of 5 across doubt with multiple questions.

Rotation Correction:

- Users can upload images rotated by some angle, which degrades OCR performance.

- Built a solution to correct the angle of rotation.
- Trained, tested, and deployed the model with ONNX conversion.
- Increased the accuracy of OCR by 30%

Encoder Models Benchmarking:

- Developed a pipeline using PyTorch to benchmark various encoder models for image search functionality on Embibe's website.
- Objective: Enhance search relevance by identifying the best latent representations of images, ensuring the most relevant questions are displayed.
- Implemented benchmarking metrics including top-K accuracy, rank accuracy, recall, and coverage.
- Evaluated models across a large database of images (lakhs of images) to assess performance under varying conditions.
- Aimed to optimize search algorithms to improve user experience and engagement on the platform.

TATRAS DATA SERVICES PVT LTD (SERVICED BASED)

Data scientist

Delhi,India

june 2019 - june 2022

In Tatas, I worked with multiple clients, gaining exposure to NLP and machine learning classification techniques. I worked in a team of 16 people following Agile methodology, encompassing roles in DevOps, Data Engineering, and QA Testing. This experience provided insights into professional project management, various tools, and security protocols.

GoodUnited

- **Objective:** Help nonprofits increase Facebook fundraiser donations, emails, and retention effortlessly.
- **Managed Service:** Allows nonprofits to leverage Facebook Fundraisers without increasing staff workload.
- **Propensity Models:**
 - **Propensity to Fundraise:** Predicts the likelihood of a person to initiate a fundraiser based on past activity.
 - **Propensity to Re-engage:** Predicts the likelihood of participation in future events based on past engagement.
 - **Increased revenue by 17%.**

Virtual Director

- **Objective:** Enhance investment readiness for early-stage businesses seeking follow-on funding.
- **Lead Churn Prediction:** Models predict when leads are likely to lose interest or disengage.
- **Conversation Sentiment Analysis:** Determines if conversations among employees indicate toxicity or positivity.

Whatz2eat

- **Objective:** Provide personalized recipe recommendations based on user-provided ingredients.
- **Recommender Systems:**
 - **Content-Based:** Recommends recipes based on ingredient similarity and user preferences.
 - **Collaborative Filtering:** Suggests recipes based on preferences of similar users.
- **Deployment:** Models and APIs deployed on AWS EC2, with APIs built using Flask for scalability and accessibility
-

EDUCATION

INDIAN INSTITUTE OF TECHNOLOGY PATNA.

Mtech In Artificial Intelligence & Data Science Engineering

Patna,India

JULY 2024 - present

PUNJABI UNIVERSITY

Btech In Computer Science Engineering

Patiala,Punjab,india

2015 - 2019

ADDITIONAL INFORMATION

- Technical Skills: Python, Scikit-learn, TensorFlow, Keras, PyTorch, XGBoost, NumPy, Pandas, SciPy, Seaborn, Gensim, Transformers, SpaCy, NLTK, CoreNLP, OpenAI, MySQL, PostgreSQL, MongoDB, Flask, FastAPI, Celery, NetworkX, OpenCV, Git, Docker, Kubernetes, TensorFlow Serving, AWS, GCP, Microsoft Azure, Serverless, ElasticDB, Time Series Forecasting.
- Languages: Fluent in Hindi (native), English
- Certifications: Applied Machine Learning Online Course **by** appliedAI
- Awards: Speaker at Hackathon 1.0 **by** rajasthan police cyber crime awareness mission.
- Awards: Employee of month at Embibe
- Awards: 2 Times Employee of month at Tatras
- Awards: Shoutout **by** CEO of Seisei.ai on linkedin