

MARYAM NAZARI

Machine Learning Researcher

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Tehran, Iran

maryawwm

Maryam Nazari

HIGHLIGHTS

- Machine Learning Expert : 3+ years of experience in designing, developing, and deploying machine learning pipelines
- Applied machine learning techniques to diverse tasks in Speech, Vision, and NLP domains
- Developed and deployed Chatbots, enhancing user engagement and improving customer support
- Contributed to the implementation of AI Voice Assistant, optimizing natural language understanding and response generation

RESEARCH INTERESTS

- Speech Processing
- Natural Language Processing
- Large Language Models

EDUCATION

University of Shahid
Beheshti, Iran
2019 - 2022

M.Sc. of Information Technology Engineering

- GPA: 4/4
- Thesis:
 - Image Captioning using transformers with POS tagging techniques
 - Supervisor: Ali Nadian
- Relevant Coursework: Machine learning, Speech Processing, Computer vision

Semnan University
Iran
2012 - 2017

B.Sc. of Information Technology Engineering

- GPA: 3.2/4

RESEARCH EXPERIENCE

MCI R&D-Iran
Jul2023 - Present

Natural Language Processing Researcher

- Spearheaded a collaborative research project focused on developing a Persian Large Language Model (LLM) tailored for integration into chatbot projects within MCI Company
- Conducted an in-depth study and evaluation of prominent LLMs, including LoRa and Llama 2, to inform the architecture and design of the Persian LLM
- Played a crucial role in the development and implementation of data preprocessing and cleaning procedures as integral components of the model training pipeline
- Worked collaboratively with the team to establish robust methodologies for training and fine-tuning the Persian LLM, ensuring its effectiveness in downstream tasks

National Elites
Foundation-Iran
Aug2020 - Dec 2021

Machine learning researcher

- Designed and implemented machine learning models for the detection of heart disease in radiological images of animals
- Established a robust labeling system for dataset preparation, contributing to the project's success
- Examined and validated machine learning models based on real-world scenarios to enhance accuracy and generalizability.
- Explored various state-of-the-art architectures, including UNet, UNet++, and other advanced models, to optimize segmentation performance

Shahid Beheshti
University-Iran
2020 - 2022

Computer Vision Researcher

- Explored diverse neural network architectures, including CNNs, RNNs, and LSTMs, with a focus on their application in computer vision tasks
- Adopted transformer networks following the state-of-the-art papers, integrating their strengths in both computer vision and NLP domains
- enhancing image captioning pipelines
- Conducted groundbreaking research contributing to the synergy between computer vision and NLP from my thesis, currently under preparation for publication

WORK EXPERIENCE

MCI R&D-Iran
Nov2023 - Present

Speech Processing Engineer

- Developed and optimized Persian Text-to-Speech (TTS) models using state-of-the-art architectures such as Tacotron2, VITS, Hifigan, and GlowTTS.
- Implemented single and multi-speaker TTS systems to cater to diverse use cases and scenarios.
- Spearheaded the development of multi-language TTS capabilities to support a wide range of languages and dialects.
- Managed the continuous integration/continuous deployment (CI/CD) process for TTS models, ensuring seamless integration into production environments.
- Established and maintained APIs for serving TTS models to other teams, facilitating easy integration into various projects and applications.
- Collaborated with cross-functional teams to ensure the effective deployment and utilization of TTS models in real-world applications.

MCI R&D-Iran
Jul2023 - Present

Chatbot Developer

- Spearheaded the development of diverse chatbot solutions, including FAQ and CRM bots, contributing to the company's R&D initiatives
- Generated and analyzed data to optimize chatbot performance for accurate and contextually relevant responses
- Collaborated cross-functionally to refine and enhance chatbot functionalities based on user feedback and business requirements

Farajahan-Iran
Mar2023 - Oct2023

Speech Processing Engineer

- Specialized in Persian language ASR, TTS, and speaker identification, optimizing system performance
- Gathered and curated essential datasets, ensuring high-quality resources for speech processing model training
- Explored leading frameworks: Kaldi, NVIDIA NeMo, SpeechBrain, Whisper, and Coqui
- Implemented and optimized Speaker identification and TTS systems, contributing to enhanced efficiency and naturalness

Deliware-
Netherlands(remote)
Nov2020 - Apr2021

Machine Learning Engineer

- Engaged in projects involving the integration of robotic systems, leveraging my expertise in artificial intelligence algorithms and models
- Trained and applied deep learning algorithms for object detection, specializing in YOLO
- Conducted image segmentation on urban city datasets for enhanced analysis
- Proficient in Robot Operating System (ROS) for seamless integration of robotic systems
- Collaborated with the programming team to develop web services in artificial intelligence and data analysis

TEACHING EXPERIENCE

Shahid Beheshti
University-Iran
2020 - 2022

Teaching Assistant

- Supported computer vision and image processing courses
- Facilitated student learning in lectures, labs, and assignments
- Conducted review sessions and provided constructive feedback
- Collaborated on course material development with professors

Shahid Chamran
University-Iran
2022

Workshop Speaker | 2nd International Conference on Machine Vision and Image Processing (MVIP)

- Delivered a workshop at the MVIP conference, sharing insights on transformers and engaging with participants in the field of computer vision and image processing
- Contributed to the exchange of knowledge and ideas within the academic community
- Demonstrated effective communication skills and subject matter expertise during the workshop

PUBLICATIONS

Image Captioning using transformers with POS tagging techniques(Under Preparation)

SKILLS

- **Programming:** Python
- **Frameworks:** PyTorch, Tensorflow, Keras, Flask
- **NLP:** NLTK, Gensim, Transformers
- **Databases:** SQL (MySQL, PostgreSQL),NoSQL (MongoDB)
- **Tools:** Git, Docker, Jira

HONORS AND AWARDS

- Ranked 2nd in IT Engineering, Multimedia Group, among 20 students
- Granted admission from Talented Student Office of Shahid Beheshti University for graduate study
- Ahmadi Roshan Scholarship Award at Iran's National Elites Foundation

CERTIFICATES

- Complete Python Bootcamp: Go from zero to hero in Python 3
- Programming for Everybody (Getting Started with Python)
- Stanford Machine Learning by Coursera
- Natural Language Processing with Attention Models

REFERENCES

Available upon request