Mohammadreza Hosseini

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Work Experience

Computer Vision Engineer Nov 2024 - Present

- Designed and implemented automated dataset collection system using Arduino-based devices for periodic image capture and server transmission, optimizing power consumption and operational efficiency for AI model development
- Developed comprehensive C++ SDK for cross-industry computer vision applications with unified interface and integrated AI models into edge devices using comprehensive testing frameworks
- Engineered real-time image processing pipeline using GStreamer, Hailo Edge AI Processors, and NVIDIA DeepStream with TensorRT optimization, achieving minimal latency performance on edge devices
- Implemented data warehousing solutions using BigQuery for large-scale computer vision datasets and optimized SQL schemas achieving 40% faster query performance through strategic indexing
- Orchestrated containerized deployments using Kubernetes with Triton Server for scalable computer vision model serving and established CI/CD pipelines reducing deployment time by 60%

AI Integration Engineer Apr 2024 - Jul 2024

- Engineered low-latency pipeline streaming camera feeds to AI server, achieving 20 ms inference time and 13 ms network latency using WebSockets
- Enabled real-time 30 fps integration within Unreal Engine using C++, Python, JavaScript, Docker, PostgreSQL, Redis, and Nginx
- Implemented data warehousing with PostgreSQL for AI model metrics, creating SQL dashboards for system health monitoring
- Containerized AI services using Docker and Kubernetes for scalable model serving and load balancing
- Established DevOps workflows reducing manual work by 90% through automation projects

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Teaching Assistant Sep 2022 - Present

- Mentored 300+ AI students in Python, algorithms, and AI languages, improving their academic and practical success
- Collaborated with Professors Simone Martini and Michael Lodi on course material preparation and assignment grading
- Developed BigQuery data warehousing solutions tracking student performance metrics across multiple semesters
- Created SQL analytics dashboards for student progress monitoring and at-risk student identification
- Implemented Docker and Kubernetes environments for consistent student development setups

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Freelance Python Developer Feb 2019 - Aug 2021

- Optimized Python scripts achieving up to 40% execution time reduction and integrated 50+ third-party APIs into applications
- Developed and deployed 10+ RESTful APIs using Flask and Django, implementing unit tests for improved code reliability
- Automated repetitive tasks achieving 50% time savings in administrative workflows through intelligent scheduling systems
- Implemented BigQuery data warehousing solutions for client projects, enabling efficient storage and analysis of large datasets
- Established DevOps practices with Docker, Kubernetes, and CI/CD pipelines, reducing client project delivery time by 30%

Education

University of Bologna	Master of Science (M.S.) in Artificial Intelligence (GPA: 3.78)	Sep 2021 - Oct 2024
University of Damghan	Bachelor of Science (B.S.) in Computer Science (Damghan, Iran)	Feb 2015 - Feb 2019

Skills

Programming Languages	Python, C++, JavaScript, Prolog, Bash
AI/ML Frameworks	PyTorch, TensorFlow, Scikit-learn, LangChain
Python Libraries	Apache Spark, Hadoop, SpaCy, NLTK, Transformers, OpenCV, Pandas, NumPy, Matplotlib, Seaborn
Database & Query Languages	SQL, PostgreSQL, Redis, SQLite
Cloud Computing	AWS, Azure, GCP
Data Warehouses & Big Data	Apache Spark, Hadoop, Snowflake, Amazon Redshift, BigQuery
DevOps and MLOps	CI/CD pipelines, Docker, Kubernetes, MLflow, Apache Airflow
Web Development	Django, Flask, Gradio, React
Tools & Technologies	NVIDIA TensorRT, NVIDIA DeepStream, Tableau, Unreal Engine, Git, Huggingface, LLM, GenAI
Certifications	AWS Cloud Quest, Cloud Practitioner | The Protection of Personal Data (GDPR and Cybersecurity) | Google Cloud Digital Leader Training | Google Cloud Engineer and DevOps
Languages	English (C1), Italian (A1)

Publications

2024 **Comparative Analysis of Transfer and Continual Learning for Vision Based Particle Classification in Plastics Sorting for Recycling**
Shami, S., Haecker, B., Aberger, J., Hosseini, M., Pestana, J., Krisper, M., 2024.
Proceedings of the Recy & Depotech Conference 2024, Montanuniversität Leoben

Additional Information

Specialized Areas	Computer Vision, Natural Language Processing (NLP), Automation
Hobbies	Hiking, Chess, Table Tennis

Last updated: January 16, 2026