

Soroush Baghernezhad

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SUMMARY

Machine Learning Engineer with over 5 years of experience developing robust machine learning pipelines in fast-paced Agile environments. Adept in research and development, deep learning, edge AI and generative models. Proven track record of delivering reliable, high-performance solutions used by over 200 thousand users.

WORK EXPERIENCE

Embedded/AI Engineer | nDitive | 2025 - 2026

- Trained efficient time-series anomaly detection models and optimized them through quantization using Tensorflow/ Python/C, reducing model size and inference latency while maintaining high detection accuracy of 94%.
- Optimized and deployed a neural network on a low-power embedded platform using C/C++, enabling real-time on-device inference.

Graduate Research Assistant | Memorial University | 2024 – now

- Working on synthetic data generation from bio-signals and wearable devices, aiming to enhance the diversity and volume of training datasets for improved classification accuracy.
- Compressed and quantized time-series data using a VQ-VAE architecture, achieving 95% reconstruction similarity to the original signals.

Machine Learning Engineer | Huma | 2023 – 2024

- Developed a Persian voice assistant by building an end-to-end voice interaction pipeline integrating ASR, NLP, LLMs, agents, and TTS to convert user speech into user intent.
- Built agentic AI for a subscription purchase service, increasing total subscribers by 24%.
- Designed a similarity-based recommendation system to personalize user feeds, improving user retention by 15%.
- Implemented robust backend services using FastAPI to ensure near 100% uptime for more than 60,000 users.

Software Engineer | Part Software Group | 2020 – 2022

- Designed robust, test-driven applications with over 160,000 active users using Kotlin, clean architecture, and design patterns.
- mentored new team members and led daily Scrum sessions to ensure efficient collaboration.

EDUCATION

- MSc in Computer Science | Memorial University of Newfoundland | 2024 – 2026
- BSc in Computer Engineering | Ferdowsi University | 2018 – 2023

SKILLS

- Languages:** Java, Python, C, C++, Kotlin, SQL, UNIX Shell Scripting
- Machine Learning:** Pytorch, Tensorflow, Tf-lite, Keras, Scikit-Learn, Numpy, Pandas, Matplotlib
- Architectures:** Generative Models, LLMs, Transformers, Time Series, LSTM, VAE, GAN, CNN,RNN, VQ-VAE, ViT, Diffusion models, DQN, PPO, Agentic AI, LangGraph, LangChain
- DevOps&Deployment:** Docker, Kubernetes, AWS (EC2, S3, IAM, VPC), Jenkins (CI/CD), Git
- Hardware:** Zephyr, West, FPGA, RTOS, STM32, Raspberry Pi, Jetson Nano, esp32, nRF series
- Interpersonal:** Agile Development, Problem Solving, Team Collaboration, Rapid Learning