



Shahriar Yazdipour [Call me Sha]

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Software Engineer (Cloud & AI)

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SUMMARY

Shahriar is a versatile **Software Engineer** with hands-on and research experience in **AI/ML**; holds an **Masters in Computer Science** from TU Ilmenau; currently at **Ubisoft**. He brings strong **cloud** expertise (**AWS, Azure**) from roles at Ubisoft and **TomTom**, and delivers across **web & backend** stacks. Research centers on **NLP** and **Generative AI** with **Transformers** and **LLMs**, applied across domains.

WORK EXPERIENCE

- **Ubisoft — Full-Stack Software Engineer, Dusseldorf, Germany:** Aug 2022 — Present
 - Built and operated event-driven microservices and serverless applications on **AWS (CDK)** and maintained **Kubernetes** clusters for cloud gaming services, focusing on availability, scalability, and observability.
 - Contributed to scalable backend services in **Java, C#, Python** and shipped internal tools in **React/TypeScript** to streamline workflows of operations.
 - Improved **DB** performance through query tuning, indexing, and schema refinements to reduce latency under peak load.
 - Enhanced **CI/CD** pipelines (quality gates, caching, parallelization) and contributed to API design and code reviews between teams in EU / NA.
- **TomTom — Software Engineer, Berlin, Germany:** Aug 2020 — Jul 2022
 - Delivered real-time traffic processing services using **Java (Spring/Quarkus)** with Protobuf over REST/MQTT in production environments.
 - Provisioned and maintained infrastructure with **Terraform** and **Helm** on Azure **Kubernetes** Service, targeting zero-downtime deploys.
 - Implemented reliability improvements (partitioning, back pressure) to sustain throughput and reduce message loss during peak volumes.
- **GFPishro — Mobile Developer:** Oct 2017 — Jan 2018
 - Developed GIS mobile applications: **Android (Java)** and **iOS (Xamarin/C#)** with robust offline support.

EDUCATION

- **M.Sc. Computer Science & Systems Engineering:** TU Ilmenau, Germany
 - **Master's Thesis:** Analysis and Implementation of **Transformer Based Text-to-SQL Models** using NLP Techniques.
 - Building an end-to-end ML pipeline for data preparation, model training, and evaluation of transformer-based solutions for Text-to-SQL and also evaluating **LLMs (GPT)** and Transformers (SEOSS) with PICARD for this problem.
 - Conducted a deep evaluation of the effectiveness and efficiency of various encoder-decoder transformer architectures (Google T5, BERT, GPT) and using incrementally parsers for constrained auto-regressive decoding of language models, assessing performance across diverse datasets like WikiSQL and Spider.

SKILLS

- **Languages:** Java, Python, C#, TypeScript/JavaScript, C++
- **Cloud and DevOps:** AWS (EC2, S3, Lambda, SQS, CloudFormation, EventBridge,...), Azure, Kubernetes, Terraform, Helm, Docker, CI/CD
- **Backend and Web:** Spring, Quarkus, ASP.NET, React, Flask, FastAPI
- **AI and ML:** PyTorch, LangChain, DSpy, N8N, Transformers and Data Processing
- **Databases:** PostgreSQL, MySQL, SQLite
- **Languages:** English (Fluent), German (B1), Persian (Native)

SELECTED SIDE PROJECTS

- **TRMNL E-ink Recipes:** 2025
 - Developed two production-grade plugins extending **TRMNL**'s focused, privacy-respecting ambient e-ink dashboard: **Beszel Server Metrics** (CPU/memory/disk, containers, network, scheduled pushes) and **TelegramToTRMNL Bot** (images/PDF/EPUB ingestion).
 - Recognized in TRMNL Community; delivered Dockerized Node.js & Python services, Liquid templated UIs, secure access controls (user ID filtering, private plugin webhooks), and cron-based update pipelines.
- **Harpoon AI Agent RAG LLM for Docs/Code/APIs:** 2024
 - Shipped an LLM agent that orchestrates internal API calls to generate documentation and code, built with **LangChain** and **Azure OpenAI**.
 - Implemented multi-step tool calling and API integrations to enable self-serve workflows; delivered as a Ubisoft Hackathon demo.
- **GraphQL Library and TUI App for Omnivore Service:** 2024
 - Authored **OmnivoreQL** (Python GraphQL client) and **OmnivoreX** (TUI) for the Omnivore app; automated releases with GitHub Actions and published on PyPI.
 - Streamlined common operations via a CLI/TUI and Python client to improve developer workflows.
- **Text-to-SQL Transformer Evaluation and PICARD-based Optimizations:** 2022
 - Evaluated Transformer-based Text-to-SQL models; applied constrained decoding with **PICARD** to enforce SQL and schema constraints.
 - Added rule-based post-processing and error analysis to reduce execution failures and improve accuracy and robustness.
 - Automated benchmarking across approaches/datasets with reproducible training and evaluation scripts.
- **Text-to-SPARQL Question Answering Transformer:** 2021
 - Fine-tuned **T5/BERT** to convert natural language questions into SPARQL queries over **DBpedia** and **Wikidata**; delivered an end-to-end pipeline using PyTorch and Hugging Face Transformers.
 - Created training datasets and semantic similarity objectives to improve query generation quality.
 - Built data prep, training, evaluation, and packaging components for reproducible experiments and deployment.
- **COVID-19 Opinion Leaders on Twitter Data Mining and Graph Analysis:** 2020
 - Processed **300GB** of social interaction data with **Dask**; applied **NetworkX**-based graph analysis and clustering to surface opinion leaders and emerging conversations.
- **MIRA Robot Navigation System:** 2019
 - Implemented **optical flow** and **color segmentation** navigation using the onboard camera in C++.
 - Combined classical vision with deep learning; optimized real-time performance via CUDA-accelerated pipelines using OpenCV and native C++ APIs.
- **Open Source:** github.com/yazdipour

PUBLICATIONS

- **Github Data Exposure using GraphQL Security Design Flaw (1k\$ Bug Bounty)** 2019
S.Yazdipour, CCSE2020 - The 10th International Conference on Computer Engineering, Ilmenau Germany* [Published]
- **Decision Support for International Students Who Want to Fund Their Graduate Studies** 2017
S.Yazdipour, N.Taherian "(IEEE) International Conference on Machine Learning and Data Science, India"* [Published]