Shahriar Yazdipour

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Software Engineer and Data Scientist

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EDUCATION

- **Masters in Research in Computer & Systems Engineering** — Technische Universitat Ilmenau
  2019 - 2022 — *Thuringia, Germany*
  - Software Architecture
  - Complex Embedded System
  - Algorithms
  - Research Project (NLP - Text-to-SparQL)
  - Research Seminar (COVID19 Tweets Data Graph Analysis)
  - Research Skills (Github GraphQL Security Flaw)
  - Image Processing and Robot vision Lab

- **Bachelor of Computer Science** — Kharazmi University
  2013 - 2018 — *Tehran, Iran*
  - **GPA**: 17/20 Iranian Scale
  - **Thesis 20.0/20.0** : A Recommendation System for Undergraduate/Graduate Applicants Seeking Financial Scholarship for Studying Abroad (Advisor: Dr. Nahid Taherian)
  - Probability and Statistics
  - Data Structure & Algorithms
  - Data Mining
  - Compiler
  - Software Design Basics
  - Databases

PROFESSIONAL EXPERIENCE

- **BackEnd Software Engineer Intern at 'TomTom' - Berlin, Germany**: **Aug 2020 - Now**
  - Main Task: Delivering services in the field of traffic and travel information, tested and applied in the real-production system.
  - Working in **Agile** environment with daily standups and **Jira Kanban** discussions.
  - Developing **JAVA Spring** Web Service for TPEG2-EAW and TPEG2-EVA Services.
  - Developing **JAVA Quarkus** Web Service with MQTT Pub/Sub Service.
  - Customizing and deploying **VernemQ MQTT Broker**.
  - Deployment on **Microsoft Azure and AKS Kubernetes Cluster**.

- **Android Software Engineer at 'GFPishro Co' - Tehran, Iran**: Oct 2017-Jan 2019
  - Main Task: Creating a Geo Information Service/Software-Package, including Web, Desktop and Mobile applications for our Customers.
  - Developing **Java / Android** Mapping system based on MapsForge renderer system, graphhopper offline navigation for our customers using IntrAnet.
  - Developing Simple Reporting Application for Client in **iOS Xamarin Forms with C#**.

SKILLS & EXPERIENCES

- **Programming Languages**:
  - **Python** (PyTorch, Huggingface, Keras, Flask, Web3, PyAutoGui, ...)
  - **Java** (Quarkus, Spring, Android, Swing,...)
  - **C#** (Xamarin, UWP, WPF, .NET,...)
  - C++/Arduino and Some Front-End Experience.

- **Tools**: Git, Microsoft Azure, Docker, Kubernetes
- **Databases/QLs**: MySql, SQLite, Neo4j, SparQL

Projects

- **Text-to-SPARQL Question Answering Transformer (NL2Script)**: Aug 2021
  - Main Task: Implementation of sentence embedding for learning the transformation of questions to SPARQL queries with DBPedia - WikiData data integration in **Google T5 and BERT Transformer**.
  - Research on finding related works in Transformers and Language Models.
  - Pre-processing and collecting a data-set with specific features needed.
  - Implement Fine Tuning steps for Google T5 model using **Pytorch**.
  - Developing pipeline from dataset to deploying the model to Huggingface repositories.

- **Covid-19 Opinion Leaders on Twitter - Data Mining and Graph Analysis**: Sep 2020
  - Main Task: Identifying opinion leaders in Twitter using social network **Graph Analysis** methods.
  - Pre-processing and gathering 300GB twitter data-set with specific features needed for the project.
  - Using Social network analysis methods such as Centrality Measures to find opinion leaders.
  - Using **NetworkX** Python library for network analysis and **Dask.py for parallel computing**.

- **Developed MIRA Robot navigation system**: Dec 2019
  - **OpticalFlow and Color Segmentation** Navigation using its camera system with C++
  - Object Detection using ResNet, ImageNet architecture with **Pytorch**

- **Recommendation System for Undergraduate/Graduate Applicants Seeking Financial Scholarship for Studying Abroad**: 2017
  - We have implemented a technique to bypass vBulletin CMS authentication system to crawl unstructured raw data from it and provide a dataset
  - Using **data analysis methods such as Decision tree, K-Nearest Neighbor and K-Means** to determine chance of getting fund for graduate students.

- **Wireless Garage Door Cracker**
  Capturing sub-1 GHz signals with RTL-SDR and Analyzing with GQRX and sending signals with YardStick1. Jul 2017

- **UWP Applications (First Persian UWP Developer)**: 2015 - 2016
  - Developed iTehran which is the First Persian UWP application.
  - Developed multiple UWP and WPF application with more than 30,000 users download overall.
  - Used MVVM, Xaml and C# and multiple Database systems.
  - Designed UI and Logo of each application using Adobe XD and Photoshop.

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]*

Certifications (GITHUB.COM/YAZDIPOUR/CERTIFICATES)

- Structuring Machine Learning Projects-Coursera
- NLP with Python for Machine Learning - Lynda
- Web Security from Shahid Beheshti University
- Artificial Intelligence Foundations - Lynda
- Python Beginner to Advanced from Udemy
- Microservices Foundations from Lynda
- CCNA from CyberTech
- NetworkPlus from CyberTech