Amirhossein SAEMI

Software Engineer

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Saarbrücken, Germany

Experienced backend developer with a strong academic background in distributed systems, operating systems, and computer networks. Demonstrated capabilities in developing applications in various fields such as Mobility, Networking, and Energy with a focus on performance and reliability. Proficient in leveraging domain-specific concepts to deliver robust and efficient backend solutions, showcasing adaptability and transferable knowledge across industries. Committed to writing testable, standard code to ensure maintainability in all projects.

SKILLS

Programming Languages	Python, Rust, C
Web Frameworks	Django, Flask, FastAPI, Django REST Framework
Big Data	Apache Spark, Hadoop
Databases	PostgreSQL, Redis, InfluxDB
Tools & Methods	Git, Docker, CI/CD, Test Driven Development
Distributed Systems & Architectures	› P2P, Event-Driven, Microservices › Replication, Sharding, Fault Tolerancy, Consistency › RPC, gRPC, Message Passing, PubSub, HTTP/HTTPS
Libraries	Asyncio, SQLAlchemy, Pandas, Numpy, Tensorflow, Keras

EXPERIENCES

Oct 2024 – Apr 2024 — **Internet Researcher, MAX-PLANCK-INSTITUT, Germany**

During my time at MPI, I was tasked with analyzing a massive dataset of 3.5 billion DNS TXT records to identify insecure or malicious use cases. This project aimed to replicate the findings of the paper "TXTing 101: Finding Security Issues in the Long Tail of DNS TXT Records" by Van Der Toorn et al. (2020) and extend the analysis using a different dataset. There, my primary responsibilities included analyzing and categorizing unique DNS TXT records and investigating abnormal use cases.

Python | Apache Spark | Apache Hadoop

Now – July 2023 — **Software Engineer, GEOPS, Germany**

- Contributed to the development and enhancement of multiple Python repositories.
- Contributed to the refactoring of GTFS/GTFS-RT ingestion core for better scalability.
- Upgraded existing repositories to use SQLAlchemy2 and integrated its asynchronous drivers.
- Contributed to the integration of APIs from Deutsche Bahn, Swiss Railways, and S-Bahn Munich.

Python | Asyncio | Django | Flask | SQLAlchemy | GraphQL | PostgreSQL | Redis | GTFS/GTFS-RT

Mar 2023 – Apr 2022 — **Software Engineer, GRIDSINGULARITY, Germany**

- Further developed the energy exchange for different energy markets.
- Enhanced matching strategies for better bid/offer matching.
- Refactored legacy code and improved performance.
- Contributed to the development of digital twins for different energy assets.

Python | Django | GraphQL | PostgreSQL | DRF

Mar 2022 – Jan 2020 — **Software Engineer, TUEMA, Italy**

- Managed a small team of backend developers.
- Designed an integrated accounting system.
- Migrated existing Django templates to REST APIs.
- Developed and maintained CI/CD pipelines.

Python | Django | PostgreSQL | DRF | Docker

Jan 2020 – Apr 2019 — **Software Engineer Intern, MAHSAN, Iran**

- Developed web APIs for interacting with a DataDiode device.
- Created APIs to modify settings across various system components such as the operating system, DD engine, OpenLDAP, network, NTP, and Active Directory.
- Developed and maintained CI/CD pipelines.

Python | Django | Linux

Languages

Persian	●●●●●
English	●●●●○
German	●●○○○

Educations

2023-2025	M.Sc. Computer Science - Universität des Saarlandes - Germany
2017-2021	B.Sc. Computer Engineering - Qom University of Technology - Iran