

Amirhossein SAEMI

Software Engineer

@saemiamirhossein@gmail.com

in linkedin.com/in/mrsaemir

github.com/mrsaemir

Saarbrücken, Germany



Experienced backend developer and research enthusiast with an academic background in distributed systems, operating systems, and computer networks. Currently working in the Internet Architecture Research Group at the Max Planck Institute, where I focus on DNS and the development of tools for large-scale internet scans. I am seeking a position that allows me to further develop my research skills, apply my knowledge in a practical setting, and contribute to cutting-edge advancements.

SKILLS

Programming Languages	Python, Go, Rust
Databases	PostgreSQL, Redis, InfluxDB
Web Frameworks	Django, Flask, FastAPI, Django REST Framework
Tools & Practices	Git, Docker, CI/CD, Test Driven Development
Big Data & Distributed Systems	Apache Spark

EXPERIENCES

Dec 2024 Now	Research Assistant, MAX-PLANCK-INSTITUT, Germany At Professor Anja Feldmann's Internet Architecture Research Group, I worked under the guidance of Florian Steurer (a PAM 2025 Best Long Paper Award winner) to develop a tool in Go to scan the enormous IPv6 reverse DNS tree and generate an IPv6 hitlist. To accomplish this, I extended an existing tool, YoDNS, which had previously been written by Florian Steurer to scan the forward DNS. During the experiment, we sent billions of queries to navigate the rDNS tree over the course of several days. Go Prometheus Grafana
Nov 2024 July 2023	Software Engineer, GEOPS, Germany geOps develops modern web applications based on geospatial and real-time data, with a strong focus on open-source technologies in transport, mobility, logistics, and the environment. At geOps, my responsibilities included: <ul style="list-style-type: none">Contributing to the integration of APIs from Deutsche Bahn, Swiss Railways, and S-Bahn Munich.Upgrading codebases to use SQLAlchemy2 and integrating asynchronous drivers for efficiency.Refactoring data processing components to enhance scalability and performance. Python Asyncio Django Flask SQLAlchemy PostgreSQL Redis GTFS/GTFS-RT
Mar 2023 Apr 2022	Software Engineer, GRIDSINGULARITY, Germany Grid Singularity is an awarded open-source technology innovator, developing peer-to-peer energy exchange marketplaces, and a cofounder of the Energy Web Foundation. At GSy, my responsibilities included, but were not limited to: <ul style="list-style-type: none">Extending the Energy Exchange Platform across multiple energy markets.Enhancing matching strategies for better bid/offer matching.Refactoring legacy codebase, enhancing system performance and stability. Python Django GraphQL PostgreSQL DRF
Mar 2022 Jan 2020	Software Engineer, TUEMA, Italy Tuema is a global team of developers and designers, specializing in web and mobile development. At Tuema, my responsibilities included: <ul style="list-style-type: none">Leading a small team of 3 backend developers.Designing an integrated accounting system.Migrating existing Django templates to REST APIs.Building and maintaining CI/CD pipelines to reduce deployment time. Python Django PostgreSQL DRF Docker



PROJETS

LARGE-SCALE DNS TXT RECORD ANALYSIS

APR 2024 - OCT 2024

 Max-Planck-Institut

At MPI, I analyzed 3.5 billion DNS TXT records to identify insecure or malicious use cases, replicating and extending the study “TXTing 101” by Van Der Toorn et al. (2020). My work focused on categorizing unique records, investigating anomalies, and examining potential inconsistencies between nameserver responses.

Python Apache Spark



LANGUAGES



EDUCATIONS

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