Filderstadt, Germany
Linkedin

Souhail Aghzafen

(+49) 176 8297 2962
s.aghzafen@gmail.com

Results-driven software engineer with extensive experience in Big Data, mathematical algorithms, and hardware optimization. Proven expertise working with industry-leading OEMs such as BMW, Bosch, Daimler AG and Cariad. Passionate about innovative software solutions, specializing in C++ and Python, with strong focus on AI applications and system integration. Multilingual and adaptable to dynamic, international environments.

Work Experience

Senior Software Engineer — **ITK Engineering GmbH** — **2021 - Present**
Data Driven Software and Sensors — Stuttgart, Germany

- Supervision of students and student work.
- Open-Source license compliance, improving compliance for software releases across multiple projects.
- Race data management and toolchain implementation.
- Developed Dense and Unified Optical Flow software solution for autonomous vehicles.
- Enhanced database management and query optimization, improving system efficiency.

Software Engineer — **ITK Engineering GmbH** — **2018 - 2021**
Software Application — Stuttgart, Germany

- Middleware OS for SoC AI Systems, using numpy and pandas to manage big data.
- Medical technology equipment, efficient and time critical medical imaging and video streaming.
- SNMP Agent Development, development of system critical notifications solution.
- Vulkan- Based 3D Engine in C++ and JAVA.
- Trucks distributed communication system Backend Unit Testing.

Software Engineer Intern — **ITK Engineering GmbH** — **2018**
Stuttgart, Germany

- Bachelor thesis: Introduction to Wedgelets and an optimization of their runtime using CUDA.
- Creating Excel Marcos in VBA for more efficiency in the functional safety process.

Working Student — **ITK Engineering AG** — **2016-2017**
Stuttgart, Germany

- Development and maintenance of a toolchain for functional safety in Excel.

Notable Technologies and Languages

- Languages: Python, C/C++, Java, C#, CUDA, GLSL/HLSL, VBA/VBS, Matlab.
- Technologies: Microsoft SQL Server, Raytracing, Azure, Git, AVX, Pandas.
- Other: Data structures and algorithms, Parallelization, efficient algorithms.

Education and Certifications

- **M.Sc. Artificial Intelligence,** IUBH, Germany. **2022-2024**
- **M.Sc. Mathematics,** University of Tübingen, Germany. **2021 - 2021**
- **B.Sc. Applied Mathematics,** University of Applied Science Stuttgart, Germany. **2016 – 2019**

Projects

- **Fast RPN –** Development of fast reverse polish notation in C++ and python.
- **Unity Native Plugin Framework –** Implementation of a C++ code injection framework for Unity.
- **Pytorch GAN –** Low parameter Generative Adversarial Network using Pytorch.
- **Linear time Chazelle triangulation –** implementation of Chazelle triangulation in linear time.

Other Sections

- **Volunteer work** – French, English and Arabic translator for the social welfare office in Filderstadt.
- **Awards** – Won the yearly mathematical challenges at the university of applied science in Stuttgart twice.
- **Certifications and Courses** – AZ-204 Microsoft Azure Certification, AUTOSAR basics.

Interests

- Big hiker of the Alps and Swiss mountains.
- I am an avid reader of scientific papers and passionate about financial mathematics.

Languages

- German (C1), English (C1), French (B2), Arabic.