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TGW Logistics GmbH
Konrad-Zuse-StraSSe 15
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Software Engineer Application

Respected Hiring Team,

I am excited to apply for the Software Engineer position at TGW Logistics GmbH, a leader in automated logistics solutions. Your recent delivery of a highly automated fulfillment center to INTERSPORT Austria in April 2025, consolidating multiple logistics locations to enhance performance and delivery speed for 1.8 million customers, demonstrates your commitment to innovative and flexible solutions. I am eager to contribute my software development expertise to support TGWs mission of advancing automation for industries like retail and consumer goods.

During my Master's program, focusing on AI, I primarily used Python and Ubuntu as my development environment to develop applications for AI-driven tasks. One notable project involved autonomous navigation of the Turtlebot3 in a selected area, incorporating object detection and avoidance, while also mapping the area and ensuring the robot could return to its origin. This project utilized ROS (Noetic) and Gazebo for virtual testing, with key ROS nodes developed in both C++ and Python. Additionally, I managed a CI/CD pipeline for software testing and validation against key performance indicators (KPIs). Data from these operations was efficiently stored, analyzed, and optimized using MySQL. Parallel to my academic pursuits, during nine months at AVL, I worked on the Adaptive AUTOSAR middleware (Service Oriented Architecture) and developing its applications in C++. These Adaptive Applications were deployed on a custom Real Time Linux Operating System using Yocto project. After this, I continued at AVL for my Master's thesis, where I was tasked with upgrading their legacy FMU Generation Utility (written in C++) from the FMI 2.0 to the FMI 3.0 standard, thereby enhancing the functionality of the existing tool for Co-simulation of automobile parts build in different systems like MATLAB, C++ etc. In my Thesis, I also leveraged Google Protocol Buffers through ASAM OSI for efficient data serialization, streamlining integration of sensor and environmental models in driving simulations, enhancing virtual testing capabilities. At Persystems, I was a Junior C++ Developer, where I developed Virtual TestBench, a Qt Desktop application for simulations of electrical components, leveraging Persystems' proprietary library. My responsibilities included designing the UI/UX in the Qt Creator IDE with C++ to ensure a seamless user experience. I have also implemented the application's logic by connecting UI widgets to custom slots, using Qt's signal-slot mechanism to manage data flow between the UI and the backend operations interfacing with Persystems' testbench library. Additionally, I have built a separate license check application for Virtual TestBench using Qt and C++.

Drawing from my Master's work on the Turtlebot3 navigation project and my professional experience at AVL and Persystems, I am well-prepared to contribute to TGW Logistics software engineering needs for automated fulfillment systems. My development of ROS-based navigation algorithms in C++ and Python for Turtlebot3, validated through Gazebo simulations and CI/CD pipelines, equips me to design scalable software for automation tasks, aligning with TGWs focus on performance and flexibility. At AVL, my work on Adaptive AUTOSAR middleware and upgrading the FMU Generation Utility with FMI 3.0 and ASAM OSI standards honed my ability to integrate complex subsystems, crucial for seamless operation in automated logistics environments. My expertise in deploying C++ applications on real-time Linux systems using Yocto ensures I can develop robust software for TGWs hardware platforms. Additionally, my experience at Persystems designing Qt-based UI/UX for Virtual TestBench and optimizing data workflows with MySQL prepares me to create efficient, user-friendly solutions and maintain high-quality documentation, supporting TGWs innovative logistics projects.

Among the many skills I have honed throughout my career, teamwork stands out as the most pivotal. My past experiences have emphasized the fundamental truth that sustainable solutions are often the result of collaborative efforts, rather than individual brilliance. I am eager to become part of the team and am committed to contributing my utmost from the very start, beginning immediately.

I would be greatly honoured to receive an invitation for an interview.

Yours sincerely
Milind