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UNIO Enterprise GmbH
Rosental 5
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Software Developer Intern Application

Respected Hiring Team,

I am excited to apply for the Software Developer Intern position at UNIO Enterprise GmbH, a trailblazer in space-tech whose launch of UNIO Move in March 2024 has set a new standard for connectivity in transport and logistics. Your innovative turnkey solution, seamlessly integrating 5G and satellite networks to drive efficiency and reliability, inspires me greatly. I am eager to contribute my software development skills to support UNIOs mission of revolutionizing mobility through always-on connectivity.

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 Masters work where I developed AI-driven applications in Python and managed complex projects in C++ at AVL, alongside my current role at Persystems refining simulation software with Qt and C++, I am well-positioned to excel as a Software Developer Intern at UNIO Enterprise GmbH. My hands-on experience with C++ and Python, demonstrated through developing ROS nodes for Turtlebot3 and AUTOSAR applications at AVL, aligns seamlessly with your need for clean, efficient code to support innovative connectivity solutions. My proficiency in designing intuitive UI/UX with Qt at Persystems equips me to contribute to developing user-friendly tools and interfaces for UNIOs space-tech products. Additionally, my background in CI/CD pipelines and testing, coupled with my collaborative work in agile teams at AVL and Persystems, prepares me to actively solve technical challenges and support cross-functional teams in UNIOs fast-paced environment. My enthusiasm for the space industry and strong communication skills will enable me to drive high-impact projects and contribute to UNIOs vision of transforming mobility.

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