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Regensburg, 29.08.2025

C++ Software Developer (Qt)

Respected Hiring Team, I am excited to apply for the C++ Software Developer (Qt) position at Abstract, following your showcase of the latest advancements in 3D technology at the Stuttgart Tech Expo on August 15, 2025, highlighting new optimization tools for game developers. Your commitment to reshaping 3D content creation through innovation inspires me deeply. I am highly motivated to contribute my skills to enhance your groundbreaking solutions in the gaming industry.

During my Masters in AI, I honed my skills in Python and Ubuntu, crafting AI-driven solutions like an autonomous navigation system for the Turtlebot3 (ROBOTIS). This project integrated object detection, avoidance, and SLAM for mapping and homing, using ROS (Noetic) and Gazebo, with C++ and Python ROS nodes. I also streamlined testing via a CI/CD pipeline, optimizing data with MySQL. In a standout Unreal Engine project, I'm developing a plugin to enhance NPC AI through reinforcement learning, tapping the Unreal NNE interface. It features an editor tab with a dropdown for selecting tailored AI models, built using UBT to override engine functions (e.g., AIModule, GameplayTasks), and viewports for real-time NPC behavior comparison. 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 built in different systems like MATLAB, C++ etc. In my Thesis, I also leveraged Google Protocol Buffers (ProtoBuf) 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 C++ Software Developer (Qt) at Abstract. My extensive experience with Qt 6+, including Qt Widgets and QML, demonstrated through developing Virtual TestBench with robust UI/UX, aligns seamlessly with your need for modern, responsive UIs and cross-platform compatibility. My hands-on expertise in Unreal Engine plugins and 3D graphics APIs like OpenGL, combined with my proficiency in C++, Python, and CMake, equips me to optimize performance and enhance your 3D optimization tools. Additionally, my background in rapid prototyping and iterative design, along with my familiarity with Git and Jira, will allow me to contribute effectively to your development workflows and deliver innovative gaming solutions.

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
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