



Vincent Karlsson

Fullstack Software Developer

9 YEARS IN THE BUSINESS

Vincent is a curious and driven problem solver who always strives to develop and streamline work through new technologies and strategies.

He has a positive attitude towards the idea that teamwork and a focus on health create the foundation for all solutions.

Vincent continuously develops his skills both during work and in his spare time to stay updated in the ever-changing world of technology.

COMPETENCE

Tools

Postman, Docker, Git, MySQL Workbench, pgAdmin4, Azure DevOps Services, Azure, Confluence, Atlassian, Jira, Visual Studio Code, Visual Studio

Methods

Clean Architecture, SOLID principles, Agile Development, Test Development, Lean, Kanban, Software Development

Programming languages

MySQL, PostgreSQL, MongoDB, SQL, TypeScript, JavaScript, Python, LUA, C#, C++

Frameworks

gRPC, .NET Core, .NET Framework, .NET MAUI, .NET Blazor, .NET, Node.js, Entity Framework, Angular

EXAMPLE OF WORK EXPERIENCES

- Full-stack System Developer & IT Hosting
- Project manager for the integration of Novatron's machine control.
- Project manager for the integration of Topcon's machine control system with Tenstar's simulator.
- Project manager for integration of Leica's new MCP80 box with Tenstar's simulator.
- Project manager for the integration of Trimble Earthworks machine control with Tenstar's simulators.
- 3D programming/development of physics engine and training exercises

WORK EXPERIENCE

TENSTAR SIMULATIONS AB 2020-01 - 2024-03

FULLSTACK SOFTWARE DEVELOPER

Vincent was involved in creating a new team for managing Tenstar's web services and other tools, called "Team Platform & DevOps." The role shifted from 3D development to a full focus as a system developer. Here, we developed a completely new suite called Tenstar User Experience, which included a new client for the simulator in Node.js, Electron + Angular, as well as a teacher tool in the form of a website in Angular called Tenstar Management Tool.

The role also involved consulting in IT and hosting of servers and databases. There was room for initiative here, and these initiatives led to driving the company towards a more cloud-based approach.

Services were created such as:

- * Handling of analytical data with OpenSearch hosted on Linux using an intermediary app with HMAC authorization.
- * Improved scripts and tools for the build pipeline in Python.
- * Hosting of Prometheus & Grafana for server monitoring.
- * Development of a major service(s) in Azure for distributing 3D software. Optimized for scalability and faster data download up to 1TB.

Competence

.NET, Entity Framework, TypeScript, JavaScript, HTML, CSS, Node.js, Electron, Angular, ASP.NET, .NET MAUI, gRPC, .NET Blazor, PostgreSQL, MySQL, MongoDB, Docker

TENSTAR SIMULATIONS AB 2021-01 - 2021-06

PROJECT LEAD

In his regular role, Vincent once again project-managed a new integration of machine control system from Novatron, based in Finland. This integration was done without an external box, as Novatron ran directly on Windows with simulated CAN data.

Competence

Project Management, C++

TENSTAR SIMULATIONS AB 2020-08 - 2020-12

PROJECT LEAD

Vincent led a team of consultants from Poland for the integration of Topcon's machine control system with Tenstar's simulator. The integration was achieved through a smooth and fast solution where Topcon's software ran on Tenstar's Android tablet and communicated with the simulator via Ethernet.

Competence

Project Management, C++, Android, Ethernet

TENSTAR SIMULATIONS AB 2019-06 - 2020-08

PROJECT LEAD

Vincent was the project manager for the integration of Leica's new MCP80 machine control platform with Tenstar's simulator. Here, he led consultants from Denmark to integrate the new system via CAN-bus with the simulator. Tenstar had previously supported the old iCON system, and it was time for an upgrade

Competence

Project Management, C++

TENSTAR SIMULATIONS AB 2018-01 - 2019-06

PROJECT LEAD

Vincent acted as project manager and programmer for the integration of Trimble Earthworks machine control with Tenstar's simulators. As the project manager, he oversaw consultants from Poland and guided the integration of third-party software with Tenstar's 3D engine for the simulated machines: tracked excavator and dozer. Trimble's software ran on an Android tablet and communicated over Ethernet to the simulator.

The project required participation from Tenstar, Trimble, and a consulting firm, and the team was spread across the world, which posed challenges with different time zones and deadlines.

The result of the integration was showcased worldwide at the major German Bauma exhibition.

Competence

C++, LUA, Ethernet, HTTP, Project Management, Android

TENSTAR SIMULATIONS AB 2015-05 - 2018-01

PROGRAMMER

Vincent has worked as a 3D programmer and training programmer, where the tasks have involved simulating various machines such as:

- * Excavator, Dozer, Articulated Hauler
- * Counterbalance Forklift
- * Forwarder & Harvester
- * Tractor

The exercises were written in LUA & C++ and targeted students in education with support for text-to-speech, session playback, networking, VR and reporting tools. This, combined with the development of Tenstar's "in-house" 3D engine using DirectX11 and Nvidia PhysX.

Competence

C++, LUA, 3D Animation, 3D Design, Game Development, Virtual Reality

EDUCATION

Formal education

Playground Squad, 3D Programming, 2015

NTI Gymnasiet, Falun - Electrical Engineering/Programming specialization, 2013

LANGUAGES

English - Fluent

Swedish - Native



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