



Infineon Technologies AG is looking for an interested and qualified student to conduct his/her

Master Thesis

on the topic

Revenue Trend Analytics Using Customized Tools for Agentic AI

Description:

Understanding Infineon's revenue generation for upcoming financial quarters is essential for gaining a clear picture of the company's performance. Customers typically place orders for deliveries well in advance of a given quarter, and these orders gradually convert into actual revenue throughout the quarter.

To achieve a comprehensive view, it is crucial to continuously estimate the **revenue of the quarter**—which represents the orders that can be fulfilled and realized as revenue—and the **revenue potential**, which reflects the overall market demand. The revenue potential often exceeds what can realistically be delivered due to production capacity constraints.

Infineon Technologies AG is one of the largest European semiconductor manufacturers that develops semiconductors and systems for automotive, green industrial power, connected secure systems and power and sensor systems. The products are developed to make life easier, safer and greener with the technology that achieves more, consumes less, and is accessible to everyone.

This thesis/ internship focuses on exploring how Agentic AI can be applied and leveraged to answer complex analytical questions based on internal data, using customized tools to enhance its effectiveness. The aim is to understand the potential of AI in addressing such challenges and to gain experience in developing tailored tools that support these tasks.

Key objectives include investigating methods for efficient data-fetching, preprocessing, and context definition, while building and tailoring tools specifically designed to enhance AI agent performance. The project also aims to evaluate how standardized protocols like Model Context Protocols (MCP) can ensure scalability and seamless integration, demonstrating the capabilities of AI agents in handling real-world, data-intensive scenarios.

Specifically, the thesis should include the following objectives:

- A **research-based framework** for applying Agentic AI to revenue trend analysis.
- A robust, proof-of-concept AI agent capable of fetching and processing data, understanding context, and autonomously completing predefined tasks in revenue analytics.
- Documentation of a standardized methodology for connecting AI tools using modern protocols like MCP, tested with Infineon-specific use cases.
- A detailed analysis of how the developed tools and frameworks perform in evaluating **revenue estimation** and **revenue potential** under varying constraints, such as demand surges or production limitations.

Deliverables

The thesis aims to deliver several key outcomes. It will develop a research-based framework for applying Agentic AI to revenue trend analysis and produce a robust proof-of-concept AI agent that can autonomously fetch and process data, understand context, and execute predefined tasks in revenue analytics. Additionally, the work will include the documentation of a standardized methodology for integrating AI tools using modern protocols like MCP, validated through this use case. Finally, a performance analysis should be conducted to assess how the developed solution evaluates revenue estimation and revenue potential under various constraints, such as demand surges or production limitations.

**Requirements:**

The thesis is suitable for Management & Technology or FIM students with a major in the area of supply chain management. Candidates must have a strong analytical background, be able to work independently and must show absolute reliability and an interest in the methodological foundation of Agentic AI and its practical use cases in solving real-world problems. Very good MS-Office skills (Word, Excel, PowerPoint) as well as good English communication and presentation skills are mandatory. Prior knowledge of Python and familiarity with financial analysis terms and techniques is a plus and will be preferred.

The thesis has to be conducted in **English**. During the thesis, employment with Infineon Technologies AG is provided.

Begin: As soon as possible
Mentor (Infineon): Dr. Marco Ratusny
Supervisor (TUM): tba, preliminarily Heiko Hoppe

Any interested student, please send by email your application together with your curriculum vitae and transcripts of records to **Heiko Hoppe** (lehre@osm.wi.tum.de)