Fakultät für Wirtschaftswissenschaften

Technische Universität München

The **Chair of Operations Management** of **TUM School of Management**, **Infineon Technologies AG**, and **BSH Hausgeräte GmbH** are looking for interested and qualified students to conduct his/her

Internship / Master Thesis (2x)

on the topic

Predictive Analytics Methods in Intermittent Demand Forecasting

Description:

Predictive Analytics is a new group of methods that uses statistical and other empirical techniques to predict future events, based on past occurrences and available real-time data. It can generate valuable information for the management of supply chain to improve decision-making.

Infineon Technologies AG is Europe's second-largest semiconductor manufacturer that develops semiconductors and systems for automotive, industrial and multimarket sectors, chip card, and security products. Their products are developed to make life easier, safer and greener with technology that achieves more, consumes less, and is accessible to everyone.

BSH Hausgeräte GmbH (BSH) is the largest manufacturer of home appliances in Europe and one of the leading companies in the sector worldwide. The company develops home appliances that are characterized by intelligent design, user-friendliness and energy efficiency. Improving the consumer's quality of life is what determines the company's activities: home appliances should make life easier.

Both **studies** should investigate the supply chain segmentation process as data pool. Based on that, the two master theses should develop approaches to forecast the demand on lead-time and amount by using predictive analytics methods in order to provide the most profitable supply chain. Hereby, a differentiation between stable and intermittent demand has to be developed and concerning methodologies to be adapted. In the end a validation with real-time data should be conducted to derive operational and managerial action items.

Goal: Implementation of predictive analytics methods to forecast intermittent demand in lead-time and amount

- Collection, preparation and analysis of data from selected products
- Differentiation of stable and intermittent demand
- Based on the outcome and data predictive analytics methods are to chose
- Forecasting of the product demand in lead-time and amount in accordance to the chosen predictive analytics methods
- Comparison between the results of analytics methods and conservative methods

Requirements:

The theses are suitable for **TUM-BWL**, **TUM-WITEC** or **TUM-WIN** students with a major in the area of operations and supply chain management (OSCM). Candidates must have a strong analytical background, be able to work independently and must show absolute reliability. Very good MS-Office skills (Word, Excel, PowerPoint) are mandatory.

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The thesis has to be conducted in **English**. During the thesis employment with Infineon Technologies AG and/or BSH Hausgeräte GmbH is provided.

A signed Non-Disclosure Agreement (**NDA**) among the parties is in place in order to protect the release of sensitive data from both companies.

Begin:	instantly
Advisor (TUM):	Gregor Godbersen
Mentor (Infineon):	Tim Lauer
Mentor (BSH):	Bernhard Czap

Any interested student, please send by email your application together with your curriculum vitae and transcripts of records to **Tim Lauer (Tim.Lauer@infineon.com)**