

Janus Bo Andersen

Software and embedded developer



PERSONAL INFORMATION

Danish/EU citizen based in Singapore with Singaporean spouse. Work in Singapore with LOC (LTVP-Plus).
Mobile +65 97243507 | E-mail janusboandersen@gmail.com | [LinkedIn](#) | [Github](#)

SUMMARY

- Software and embedded developer with top of the year GPA, completing degree at end of 2021.
 - Aiming for 6 months internship in Singapore start-up tech sector.
 - Pursuing passion for tech and engineering by moving into tech from finance.
 - Have 10 years of experience with analytics, projects and leadership from finance and pharma.
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SELECTED TECH PROJECTS

- Machine learning on hardware accelerated SoC/FPGA edge device, processing vision data faster, lower power.
 - Computer vision pipeline delivering 3D scene reconstruction and image depth-segmentation using multiple views.
 - Lab equipment-as-a-service, deploying dockerized backend, responsive frontend and IoT connection using MQTT.
 - Smart industrial energy metering with wireless M-Bus communication, on-premises gateways and Cloud backend.
 - Development of DSP algorithms that indicate heart arrhythmias and measure HRV using ECG data.
 - Quadrotor drone dynamic control system development.
 - Productivity software rolled out to 2,000+ employees globally at industry-leading pharmaceutical company.
 - Multi-currency forex risk mgmt. system deployed in Treasury of multinational pharmaceutical company.
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EDUCATION AND AWARDS

B.Eng. Electronic Engineering, Software and Embedded | Aarhus University, Denmark 2018 – 2021 exp.
Top of the year with current GPA 11.9 (12-point scale).

- Core focus on software, cloud, embedded and distributed systems.
- Elective focus on machine learning, computer vision, linear algebra, SoC design.
- Elected to education committee.

M.Sc. Finance | Aarhus University, Denmark 2007 – 2009
Top of the year with GPA 11.5 (12-point scale).

- Master's thesis: Portfolio aspects of commercialization of microfinance.
- Focus on corporate finance, financial engineering, quantitative methods, statistics, econometrics.
- Selected for international Doing Business in China case competition by BCG and Novozymes.

B.Sc. Economics and Business | Aarhus University, Denmark 2004 – 2007
Top of the year with GPA 10.6 (previous Danish grading scale).

- Bachelor's thesis: Interest-rate term structure models.
 - Exchange at Singapore Management University.
 - McKinsey Award and Scholarship: First prize for best B.Sc. result.
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PROFESSIONAL EXPERIENCE

Consultant Developer 2016 – 2017
Novo Nordisk A/S (contract)

- Developed visual communication and productivity tool rolled out to 2000+ employees globally, and in use today.

Head of Finance, Legal, Logistics & IT

2014 – 2016

Novo Nordisk Pharmaceuticals (Philippines) Inc., Philippines

- Achieved operating profit CAGR of 20.9% over two years, versus -2.5% CAGR in two years prior, exceeding targets as responsible for finances and budgets. Hit operating margin of 55%.
- Achieved sales CAGR of 23.7% over two years vs. 4.1% two years prior and growing affiliate from less than 60 FTEs in early '14 to more than 100 in '16, by driving turn-around together with new management team, through focused strategy, new product launches and investments in the market, winning market share.
- Led department of 10 local employees, building team up from 3 and driving performance through team leader structure. Attracted and led 3 international employees joining on longer rotations and EBTs to deliver projects.
- Other projects delivered with team: Internal control program. IT for invoice capture, travel and exp. management, procurement. Logistics planning step-up for new launches and no stock-outs. Business ethics compliance by training sales force and tracking health-care provider interactions. Office relocation and IT infrastructure upgrade.

Financial Risk Manager

2011 – 2014

Novo Nordisk A/S, Corporate Treasury, Denmark

- Successfully hedged the OP impact of major currencies on Group operating profit with 8-14 months target horizon during 2013-2014, managing position in OTC forwards and options, equivalent to about USD 5 billion nominal.
- Developed and implemented quantitative multi-currency hedging and risk mgmt. system with McKinsey and PwC during 2013, approved by Audit Committee and Corporate Financial management, achieving a clearer picture of the impact of currency volatility, correlations and cash flow uncertainty on net financials and operating profit.
- Recommended capital structure changes to Executive Management and Board of Directors during 2011-2013, achieving competitive capital structure vs. peer group, resulting in extensive share buyback programmes of e.g. DKK 14 billion (USD 2.3 billion) for 2013, as well as 36% and 25% growth rates in dividends for FY11 and FY12.

Global Finance Graduate

2009 – 2011

Novo Nordisk, Denmark, India, China

- 2-year international talent program with rotations in four areas of the global finance org. Key achievements:
- Contributed to kick off the expansion project of the Global Service Centre in Bangalore, India in 2010, from 70 FTE accounting organisation in '10 to ~400 FTEs covering many SVP areas in '14, supporting establishment of new VP area, driving benchmarking and alignment of policies across multiple incoming SVP areas, and attracting and supporting off-shoring of business processes from new regions.
- Located in Beijing, China in 2010-'11, developed extensive analysis and overview of the Chinese healthcare system and local distribution system, also giving transparency and recommendations to the global finance organisation on distributor management and auditing processes.

Quantitative Analyst

2007 – 2009

Jyske Bank A/S, Quantitative Research, Denmark

- Developed, implemented and tested credit risk models on the bank's loan portfolio, with focus on EAD and LGD, and introduced use of a robust estimation method to deal differently with outliers than previously.

TECHNICAL SKILLS

Languages: Danish native • English fluent • German business • Mandarin basic

Software development, programming languages, build and test systems:

C, C++11/14/17, Python 3, Matlab, Bash/sh, VBA • CMake 3.x • GoogleTest, Catch2 (C++) • Unittest, PyTest (Py)

Cloud, Linux, DevOps:

AWS • Oracle Linux 7, CentOS 7, Ubuntu 18.04, 20.04 • Git, Github • Docker, Docker-compose • Jira

Web technologies, databases and networking:

Django, Flask • Nginx • HTML5, CSS, Bootstrap 4 • PostgreSQL, MongoDB • MQTT, TCP/IP, Sockets

Analysis, Machine Learning, DSP, Computer Vision:

Python: NumPy, SciPy, Pandas, Scikit-learn, Keras, Matplotlib, Seaborn • Matlab: Filter Design, DSP, Image Processing, Computer Vision, Control System • OpenCV • SAS: BASE, STAT, IML, SQL • SAP: FI/CO, BW

Embedded MCU: FreeRTOS • Freescale, Arm Cortex-M0+, Cortex-A8 • TI C5535 DSP • CAN, I²C, SPI, UART

Embedded SoC/FPGA: VHDL, HLS/SDS • Xilinx Vivado, SDK, SDSoc, Vitis • Xilinx Zynq-7000 SoC, Artix-7 FPGA