Hemant Swarnkar (18 Years' experience, Master in Technology, MBA in Industrial Economics)
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With 18 years of experiences in a complex telecom industry, I have honed skills in embedded software development, product development processes, innovation management. I am well experienced in real time embedded system challenges like CPU, Memory and thread/process handlings. My experience in log analysis, understanding standards, and multiple methodologies (waterfall and agile) with scrum gives me a great understanding of internal challenges and solutions. My coding and script experience in C, python, Matlab and Simulink along with customer interaction and presentation skills makes me a strong candidate for position in embedded system or product development.

My educational record and trainings prove my continuous energy for learning and adopting new changes and challenges. My other skills as a great team player, positive attitude, cross function team member and scrum experience fits me into modern way of working and future challenges.

Tools and methodologies used: C, Eralng, python, Matlab, Simulink, Kubernets, vs code , RTOS, e-language, Waterfall, Agile, Scrum, Git, Gerrit, ChatGPT (prompt engineering), CI/CD, Company specific processes.

CURRENT ASSIGNMENT

Technical System Manager (Software developer) 2021-04 – till now

Company: Ericsson AB

My current work involves leveraging my telecom technology experience and leadership skills to gather and software implement customer requirements (Coding in Erlang), as well as exploring new technologies like AI and ML to improve team efficiency and performance. I am responsible for presentations, documentation, and securing agreements with customers. Internally, I am also one of software developer (Erlang), the driver for adopt AI tools, an innovation culture through hackathons and other platforms, and identify and mitigate bottlenecks in product development. In addition to technical skills, I have demonstrated strong soft skills such as proactivity, teamwork, a positive attitude, and accountability by achieving great results. This role has enhanced my expertise in strategic process development and innovation, and provided opportunities to interact with and present features directly to Ericsson's customers.

Skills used: software coding and testing, Technical Lead, Multiculture workplace, Leadership (decision making, teawork, and execution), strategic planning, customer interactions, and innovation leadership.

Tools and Methods- Erlang, Kubernets, vs code, Scrum, Agile, Data analysis, AI addoptation in development, MS power point, MS excel

Software Developer 2016-10 – 2021-04

Company: COMBITECH AB

This work was to use prior knowledge of 3G and 4G telecom technology and implement requirements for the 5G high band feature and reach to desired performances. I was one of the responsible person for following complete software development process from gathering feature requirements to end-to-end development, testing and analysis. I was involved into ORAN implementation for 5G HB and the specific responsibility to participate into architectural changes, system trace analysis, troubleshooting, testing and integration including node configuration.

This work helped me to use and gain more experience and knowledge in python scripting, system data analysis, PCAP file analysis, node configuration and embedded C coding, and hardware memory and cycle optimization techniques, system level simulation and profiling, java coding, and RSARTE (model based developing tool).

Software Developer Telecom 3G R&D 2013-09 - 2016-09

Company: ERICSSON AB

I worked on Ericsson's product which handles multiple telecom standard (2G, 3G, 4G) in one digital unit.

My team was responsible for software development for their new hardware named DUS. Apart from good software development skill, this task required good understanding of embedded system, and cycle and memory layout and data handling at digital signal processor.

I participated to gathering requirements implementation and testing at different level i.e. module, node, and system level. I have also proved my competency in embedded system and ability to understand complex system by achieving Ericsson's release deadlines. I also proved myself as a proactive, positive, creative, and responsible team player. We achieved these targets by following agile way of working and scrum methodology.

Senior DSP Physical Layer Developer 2011-09 - 2013-08

Company: TELENT TELECOM AB

Role: Software developer

This task demand cross functional work i.e. team was responsible for end-to-end development of feature for node-b. We were responsible for node-b HSUPA-DC DL feature. This demand high work on EUL scheduler at DL side, and same time the signal handling from other subsystem at RBS and RNC. This task required high degree of system understanding and coding skills. I have been involved into baseband specific responsibility i.e. L1 design, planning, coding for feature, and also implementing all signal dependencies on other subsystems. This work also involved feature testing, and writing/updating respective documents.

I received professional training on RBS system as well as on soft skills to fulfil work requirements.

Tools/language: C, C++, Matlab/Simulink, clearcase, Make environment and customer specific Tools, specman, e-language

Technical Lead 2010-05 - 2011-08

Company: WIPRO PVT LTD

Role: Technical lead

This task involved trouble shooting, fixing bugs and updating test cases for RAKE receiver, and searcher part for Uplink baseband processor of WCDMA; This work involved implementation of WCDMA physical layer control signaling, and architectural design (state, and resource handling). I have fulfilled these responsibilities with great level of satisfaction and also built great competency in embedded system and architecture.

Tools/language: C, CCS, SVN, and customer specific tools.

WCDMA BB Signal Processing Algorithm Development 2008-08 - 2010-04

Company: TIETOENATOR TELECOM R&D INDIA

Role: Senior software engineer and Team leader

This task required trouble shooting, fixing bugs and updating test cases for RAKE receiver (special channel estimate technique in WCDMA technology), and searcher part for uplink baseband processor of WCDMA; This work involved better understanding, and implementation of WCDMA physical layer control signaling, and architectural design (state, and resource handling). New feature implementation, related to WCDMA standard, was also part of the responsibility. I have satisfactorily fulfilled requirement by performing following task regularly

- Analysis, debug, and optimized RAKE receiver algorithms, and processing.
- Delivered a lot internal, external, as well as Customer TR/CR.
- Proactive discussion on new technique and technology in respective field.

This task have gave me opportunity to lead 6 engineer's team, which was greatly appreciated by higher management team.

Tools/language: C/C++, Matlab, CCS, clearcase, customer specific tools

Reliance Technology Innovation Center (R&D) 2006-07 - 2008-07

Company: RELIANCE TELECOM PVT LTD, INDIA

Role: Embedded Software Developer

This Project included to work on CDMA2000 Physical layer for Baseband signal processing. This task involved developing algorithms, creating test scenarios for channel estimator. I was responsible to understand the standard and real hardware before starting and finalizing algorithms for CDMA system. This work was very complex in nature and required coordinated way of working and proactive involvement of individual. My work concluded with full satisfaction and great achievement of performances of system.

Tools/language: C/C++, Matlab, Simulink, VisualDSP, Clearcase, TigerShark processor (Analog Device).

Estimation, Detection, and Tracking 2005-06 - 2006-06

Company: DAIICT

Role: Research Assistant

This Project was for Naval Science Tech Lab (NSTL), India to have an algorithm for underwater navigation system in DAIICT. It was expected to have estimation, detection and tracking algorithms for torpedo by analyzing data from the sensor on ships. During this project I was involved in analysis of data and finding optimal method for estimation and tracking of torpedo based on available low Power, low variance data.

This work also demanded high mathematical background, analytical skill on advance filer (Kalman filter, Extended Kalman filter, partical filter, etc). This work concluded with technical report and following publication.

Tools/language: Matlab/Simulink

EDUCATIONS AND COURSES

Educations

- **M.Tech.** Signal processing, **DAIICT**, India, 2006
- **MBA** Industrial economics (distance)**, BTH**, Sweden. 2018
- **Foundations for Strategic Sustainable Development**, BTH, Sweden, Mar 2020
- **Sustainable Energy Systems** BTH, Sweden, Jan 2021
- **Strategic planning for organizational sustainability transitions**, BTH, Sweden, Jan 2023

Company Provided Courses

- Leadership Core Competency, Ericsson, 2022
- Introduction to 42426 safety standard, Combitech AB, 2018
- Agile, Combitech AB, 2017
- Introduction to Sustainability, Combitech AB, 2017
- Team building and creative feedback, Ericsson, 2012
- SW architecture, and data structure, Wipro India Pvt Ltd, 2011
- Introduction to WCDMA Technology, Tieto Enator, 2008
- Introduction to CDMA2000, Reliance Telecom Pvt Ltd, 2006

Publications

- Swarnkar H. C. vijaykumar, ”Cartesian model represented torpedo motion estimation algorithms using bearings only measurements”, Technical report Feb.2006,Naval Science and Technological Laboratory (NSTL), DRDO,India.
- Swarnkar H. C. vijaykumar,” Passive Cartesian modelled Torpedo Tracking using Extended Kalman Filter, Pseudo Linear Estimator and Particle Filter” International Journal of Aerospace Engineering, manuscript number 97246.

COMPETENCE AREAS

Relevant Competence

Sustainable product development, data analysis, AI adaptation, Communication and Presentation, Leadership (Decision, team building and execution), Experimental learning

Methods

Agile, cross functional (XFT) functions, scrum, Kanban, and waterfall. System analysis and ABCD method for strategic planning

Language

English, Swedish

References can be provided on request.