

Yarib Israel Nevárez Esparza.

Place and date of birth: Durango, Mexico. 05/26/1986

Nationality: Mexican

Marital status: Single

Profession: Electronics engineer

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GitHub portfolio: [YaribNevarez \(Yarib Nevarez\)](https://github.com/YaribNevarez) <https://github.com/YaribNevarez>

Education.

Spring 2009	Bachelor of Science in Electronics engineering Instituto Tecnológico de Durango (México)
Fall 2017	Master of Science in Embedded Systems Design University of Applied Sciences Bremerhaven (Germany)

Professional experience.

January 2009 – June 2011	Texas Instruments (<i>Embedded software engineer – contractor</i>) Support and development of embedded software for handling GUI, image, and color for TI – NSPIRE Graphic Calculator.
June 2011 – March 2012	IBM (<i>Software engineer – contractor</i>) Design and development of Qt application tools for Anaconda 4 th generation storage library, and support for MFC application tools for TS3500 storage library.
March 2012 – March 2013	Continental Automotive (<i>Embedded software engineer</i>) Development of low-level firmware drivers/bootloaders for automotive cluster panels (GM, Chrysler, Suzuki, and Toyota).
March 2013 – Sep 2015	IBM TOSHIBA TGCS (<i>Staff software engineer</i>) OS field defect support, Linux-4690 POS machines. Field defect support and development of customer applications for POS machines.
October 2015 – March 2017	University of Applied Sciences Bremerhaven (<i>Student - Master of Science In Embedded Systems Design</i>) Real-time software, model-based software development, digital systems - VHDL, AP SoC design, discrete control, DSP design, and analog-digital instrumentation.
May 2017 – October 2017	E.I.S. Electronics GmbH (<i>Master thesis intern</i>) Thesis: “Concept of smart avionics controller involving the integration of internet protocols, file systems, data acquisition, processing, and storage.”
January 2018 – May 2019	Carbon Robotics Inc (<i>Embedded Systems Engineer</i>) Hardware/Software co-design of embedded linux platform for robotic applications on embedded FPGA.
May 2019 – May 2022	Institute of Electrodynamics and Microelectronics, University of Bremen (Research assistant, PhD candidate) Dissertation: “Deep Neural Network Accelerators Based on Approximation Techniques for Energy-Efficient Industrial Internet-of-Things.”

Research publications.

Conference:

Y. Nevarez, A. Garcia-Ortiz, D. Rotermund and K. R. Pawelzik, "Accelerator Framework of Spike-By-Spike Neural Networks for Inference and Incremental Learning in Embedded Systems," *2020 9th International Conference on Modern Circuits and Systems Technologies (MOCAST)*, 2020, pp. 1-5, doi: 10.1109/MOCAST49295.2020.9200288.

Journal:

Y. Nevarez, D. Rotermund, K. R. Pawelzik and A. Garcia-Ortiz, "Accelerating Spike-by-Spike Neural Networks on FPGA with Hybrid Custom Floating-Point and Logarithmic Dot-Product Approximation," in *IEEE Access*, doi: 10.1109/ACCESS.2021.3085216.



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