Roshan Silvester Lopez

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Professional Experience

Associate, *Federal Bank*   2023 Oct – present
- Handling diverse roles, including customer relationship management, cash handling, online financial transactions, and ensuring KYC compliance.
- Playing pivotal role in address proof verification for corporate bank accounts, contributing to the seamless operation of the bank.

Education

B.Tech. Electronics & Communication, *Government Engineering College Thrissur*   2019 Aug – 2023 Jul
77.8% (First class)

AISSCE (12th) (Computer Science), *Kendriya Vidyalaya No.1, Kochi*   2018 Jun – 2019 May
93.8%

AISSE (10th), *Kendriya Vidyalaya No.1, Kochi*   2016 Jun – 2017 May
91.2%

Projects

Lightweight Cryptography Coprocessor   2022 Sep – 2023 May
- An FPGA-based coprocessor for accelerating cryptographic algorithms. Designed an IoT System that reads sensors' data, encrypts them using an FPGA Based Cryptographic Accelerator, and publishes them on an MQTT Broker.
- Developed and implemented AES-128 core in Verilog on XILINX PYNQ board and implemented AXI-STREAM interface for communication between AES-128 core and ARM processor.

Sign Language Translator, *A device that translates ASL into text/audio.* ⬈   2022 Apr – 2022 Jul
- Smart speaking system that helps mute people in conveying the message to regular people using hand motions & gestures.
- The translator is a normal, cloth glove fitted with flex sensors along the length of each finger and the thumb.
- The output from the sensor is analog value and is converted to digital and processed by using microcontroller

Library Management System, *A software based application for libraries.*   2019 Jan – 2019 Mar

Publications

Review on FPGA Implementation of Lightweight Cryptography, *IEEE Xplore* ⧉   2023 Jun 08
- The paper assesses NIST LWC finalists for wireless sensor networks, emphasizing FPGA benchmarking metrics, security, and design. It highlights the potential of cryptographic algorithms combined with hardware to enhance sensor node security, efficiency, and lifetime. The study concludes with optimization strategies and future directions for lightweight cryptographic coprocessors in WSNs.

Skills

- C++
- Python
- Adobe Photoshop
- Adobe Premiere Pro
- Figma
- Blender
- Google Forms
- Notion
- Flutter

Awards

1st Position in State-Level UI/UX designing, *ISTE Kerala* ⧉

2nd Position in Inter-College Blog writing, *ISTE GEC Thrissur* ⧉

Responsibilities & volunteering

Social Media Head, *IEEE SB GECT*   2021 Feb – 2022 Jan
- Strategizing and developing social media content for maximum engagement.
- Handling various social media accounts with meticulous care.
- Being up to date of current trends to increase engagement.

Design Lead, *Graffiti*   2020 Mar – 2021 Jan
- Developing design templates and backgrounds for events.
- Creating posters, promo videos, motion videos when required.
- Promoting the activities of the club through concepts of art and design.

Languages

- English
- Hindi
- Malayalam

Courses

MATLAB Onramp, *MATLAB Training Services* ⧉

User Experience Design Essentials, *Adobe XD*