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October 26, 2023

Emerson

6021 Innovation Blvd,

Shakopee, MN 55379

Greetings,

I am interested in the Embedded Firmware Engineer position posted on your careers page and am passionate about developing drivers and working on low-level code. Doing that at Emerson would be my pleasure. In addition to meeting the requirements, I have experience developing projects in teams and working with the challenges presented in that process. Further, through this and working as a peer mentor, writing and maintaining documentation for assignments and projects to effectively communicate requirements and specifications to be met or details about what certain API functions do has become part of my daily workload.

I’ve worked with various microprocessors for diverse applications, developing drivers and applications utilizing numerous peripherals (Timers, UART/SPI/I2C, ADC, DAC, etc.) and implementing an RTOS. This has improved my debugging skills as figuring out the state of the processor and peripherals to identify erratic behavior often involved stepping through the program and observing serial communications and other peripheral devices with Oscilloscopes/LSAs to gather more information. Further, developing test benches for VHDL has reinforced these skills, as the significance of capturing all edge cases in tests is essential to producing a correct implementation.

There is no substitute for experience working on real, production-level projects; however, through my research experience with the Embedded Systems Lab at UF, I spent time working with graduate students and other undergraduates on verifying real trusted execution environment (TEE) solutions. Learning about TEEs was not my only goal; I also benefitted from the opportunity to dive into the implementation of Intel’s TDX module, gaining experience from reading and understanding production-level code and ultimately developing a model to encapsulate the data confidentiality mechanisms.

I would be excited to work for Emerson to develop myself and contribute to your designs. If you have any questions, please feel free to reach out through my cell, (904)-571-7566, or email me at [emmett.kogan@gmail.com](mailto:emmett.kogan@gmail.com). Thank you for your time.

Regards,



Emmett Kogan