Cover Letter

Hello there,

This is A. Aasish from the University of Florida graduating with a master's in electrical engineering. After completing my coursework, I decided to work in the Semiconductor industry and transfer my skills and experience to the field. Electrical engineering is a broad domain where one can excel in of the breadth courses. I have specialized in Electronics (Analog IC design) and did basic and advanced level courses in it. To build integrated circuits, one must have knowledge of semiconductor-level physics and a systematic level of understanding. My coursework in UF is standard and prepared me well for the industry. It's not only theoretical knowledge but also practical skills acquired by circuit design tools like Cadence Virtuoso, MATLAB, Simplis, and Ansys. By having well-experienced professors and rigorous coursework, I am confident that I can do well in Entry level design positions in Semiconductor companies.

After one year of coursework in UF, I have done a summer internship in a leading IC design company. This experience totally changed my view towards IC design. I got to know IC design flow from the customer end(requirement) to product realization. I got to know how system-level engineers define specifications for customer requirements and communicate them with designers. I worked on one of the features (soft start) in the buck switching regulator, where I identified the circuit responsible for this feature and compared the complexity of the circuit in two products. I have created a test bench for verifying the functionality of the soft start feature and understanding it's working. By creating a unity buffer, I have reduced the complexity of the amplifier used in the block. During my internship, I learned that the circuit will not work ideally as in the simulation setup, the MOSFET parameters vary a lot in the fabrication process, these are minimized by using simulations like Monte-Carlo, and PVT. To gain some experience in IC design, I have done some projects in my coursework. I had designed industry-oriented projects like Low Drop out regulators, Voltage references, Op-amp, Comparator, Flash ADC, Switched Capacitor circuits, Feedback control for Buck regulator. By doing these projects I have increased my intuition skill in IC design and comprehending complex equations while designing.

Since I have gained enough experience in Analog IC design through coursework, Academic projects, and summer internships, I believe I am ready to work in the industry and put my skills and experience on the table. I know there is so much to know for doing a good job in this field, but these skills will only be acquired by working as a full-time designer. Take a look at my GitHub profile for academic projects (https://github.com/AasishArumilli).

Thank you,

A.Aasish.