04/01/2024
Maxx Yung
3333 Walnut Street, Philadelphia, PA 19104-6193
347-820-1299 | myung11@seas.upenn.edu

Atomic Semi: Interest in the Process Engineering Internship Role

Dear Hiring Officer,

I am writing to apply for the Fall Process Engineering Internship role, and that your colleague Jay recommended that I apply to. As an incoming undergraduate sophomore majoring in Materials Engineering (concentrating in nanotechnology and sub-matriculating into nanotechnology) at the University of Pennsylvania, I believe I am well-suited for this role.

During this spring semester, I was accepted as the sole undergraduate researcher from UPenn to assist the nanofabrication processes that occur at the Singh Nanotech Center (one of the largest Northeastern nanofabrication labs in the United States) – including hands-on end to end wafer processing: from preparing the wafers to following the standard procedures for wafer development, including deposition, etch, and lithography equipment available at the Singh Nanotech Center. And for the summer, I would lead my own project in developing true neuromorphic computing devices by designing my own CMOS multi-electrode arrays.

My previous six summers were also spent researching at Stanford Med, Penn Med, and SUNY Neuroscience Institute, where I led my own research project, read hundreds of papers, analyzed current data, and iterated on experiment methodology towards identifying novel cell processes – leading to various international and national research awards, and pending or associated publications in Neuron and Nature Methods – which has instilled a strong sense of self-sufficiency, but also collaboration in a fast-paced and team-oriented environment.

From speaking with prior and current employees, as Atomic Semi aims to optimize process improvements and prides itself on quick iteration cycles and scrappy efficiency, I highlight my eye for identifying time and cost bottlenecks by leveraging my Python data processing and scripting skills to optimize various processes: automating in-house ML vision cell models to save $20,000/year in costs; reducing microscopy imaging processing time by 97%, developing an AI workflow to accelerate content output by 800%, and streamlining data processing and visualization at SUNY Neuroscience Institute, leading to thousands of saved hours.

I am confident that my prior research experiences and internships, my current research experience at the Singh Nanotech Center, and my self-taught software experience, is a good fit for this position. Thank you for your kind consideration. I am grateful for your time and I look forward to hearing from you.

Sincerely,