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Pro-dev
28 May 2023

Finding a Dream Job

First I started my search on Handshake, and most of the jobs were internships and introductory-level positions. However, this assignment is to find a dream job. Then I began searching on Dice. I searched for “Software Engineer” and began browsing. I really didn’t find anything that I found fit the “dream job” description. My second search was “machine learning” and I browsed a couple of postings there as well. However, I wrote about machine learning last term and wanted to research something else. I then searched for AMD Job Openings in Google and began browsing what they had available. That is when I found this posting (Job Listing).

The job I found is a Deep Learning Library GPU Software Development Engineer, and essentially the role is to write “high-performance GPU kernels.” These kernels are meant to be run in parallel on a GPU. Specifically, the library that this job is working on is the MIOpen or a machine learning library that is being developed by AMD. MIOpen is an open-source library that is used specifically for deep learning. I found this interesting because I am taking Parallel Programming this term, and I find hardware like GPUs incredibly fascinating. The reason I got into computer science was that I built my first computer, and I found it incredibly disappointing that I didn’t know how to leverage the PC I had built beyond gaming. Now I feel like I am just beginning to understand what I can leverage my PC to do.

I am nowhere near qualified for this position. I feel as if I would either need to get a master's degree or begin to work on my own projects within the field slowly building up a resume. Even then, I would have to start at a more entry-level position than this. I would need to become much more comfortable with C, C++, and most likely x86 assembly. I would also need to study algorithms in much more detail. I don’t know if I will ever get there, but it is really cool to see what is going on in the industry.

Deep Learning Library GPU Software Development Engineer

Apply

Locations: Santa Clara, California
Categories: Engineering
Req ID: 31546
Hiring Target Min: USD $157,120.00/Yr.
Hiring Target Max: USD $235,680.00/Yr.

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Job Description

WHAT YOU DO AT AMD CHANGES EVERYTHING

We care deeply about transforming lives with AMD technology to enrich our industry, our communities, and the world. Our mission is to build great products that accelerate next-generation computing experiences – the building blocks for the data center, artificial intelligence, PCs, gaming and embedded. Underpinning our mission is the AMD culture. We push the limits of innovation to solve the world's most important challenges. We strive for execution excellence while being direct, humble, collaborative, and inclusive of diverse perspectives. This is who we are at our best. One Company. One Team.

AMD together we advance_

THE ROLE:
AMD is looking for an influential software engineer who is passionate about improving the performance of key applications and benchmarks. You will be a member of a core team of incredibly talented industry specialists and will work with the very latest hardware and software technology.

THE PERSON:
The ideal candidate should be passionate about software engineering and possess leadership skills to drive sophisticated issues to resolution. Able to communicate effectively and work optimally with different teams across AMD.

KEY RESPONSIBILITIES:

- Work with AMD's architecture specialists to improve future products.
- The ideal candidate will be responsible for writing high-performance GPU kernels for AMD's Machine Learning and Deep Learning Library: MIOpen (https://github.com/ROCmSoftwarePlatform/MIOpen) and Composable Kernel: Performance Portable Programming Model for Machine Learning Tensor Operators
- They will be porting and optimizing algorithms for new GPU hardware Perform code reviews, build unit tests, author detailed documentation related to their work, and work with on-site and offshore teams to deliver the software solutions on schedule
- They will play a key role in all phases of the software development including system requirements analysis, coordinating feature design and development across functional and organizational boundaries
- Stay informed of software and hardware trends and innovations, especially pertaining to algorithms and architecture
- Design and develop new groundbreaking AMD technologies
- Participating in new ASIC and hardware bring ups
- Debugging/fix existing issues and research alternative, more efficient ways to accomplish the same work
- Develop technical relationships with peers and partners

PREFERRED EXPERIENCE:

- Strong programming skills in C/C++; experience with CUDA programming and CUTLASS preferred Experience with LLVM Compiler, and compiler optimization techniques for GPU computing is preferred.
- Experience or knowledge about BLAS operators and GEMM optimization.
- Knowledge of Computer Architect and GPU architect.
- Good teamwork and interpersonal skills required Ability to work independently and within complementary teams
- Demonstrate flexibility, strong motivation, and a proven track record of meeting results-oriented deadlines
- Knowledge with deep neural network machine learning technologies and modern machine learning