Analog Custom Layout Engineer

Job Description

Huawei Canada's rapid growth has created an excellent opportunity to build and grow your career and make a big impact to everyone's life. The IC Lab is currently looking to hire Analog Custom Layout Engineers on a full-time basis for Huawei's Markham Office.

In this role, you will be working in a team environment performing full-custom analog and mixed-signal layout of next generation high-speed interfaces and signal integrity systems (aka SerDes, PHY, HSS, wireline transceivers, optical transceivers) in deep submicron FinFET technologies.

Responsibilities

You will be responsible for layout floor planning, and both block-level and top-level full-custom layout of analog and mixed signal systems. You will put into action your solid understanding of advanced technologies and analog design fundamentals to create high-quality high-speed (>10Gbps) analog and/or low-speed high-precision analog layouts. You will utilize your strong experience in deep submicron CMOS and FinFET technologies. You will also use your strong custom layout experience to supervise less senior layout designers.

Qualifications

- • MASc or BASc in Electrical Engineering or equivalent degree + 5 years of relevant experience in Analog/Mixed-Signal full-custom layout
- • Experience in deep submicron CMOS (28nm or below)
- • Experience in FinFET technologies is an asset
- • Recent hands on experience with Cadence Virtuoso and Virtuoso-XL tools and environment
- • Experience in SKILL programming, Mentor Calibre DRC/LVS/PERC, and Apache Totem EM & IR analysis is a plus
- • Experience in layout lead roles and top-level layout integration is an asset
- • Experience in high-speed analog layout is an asset
- • Knowledge of analog design fundamentals including one of: SerDes, ADC/DAC, high-speed digital, RF, PLL is a plus

We thank all applicants for their interest in career opportunities with Huawei. Only selected candidates will be contacted for an interview.

Analog Design Engineer

Job Description

Join one of the strongest and most successful SerDes development teams in the world and largest mixed signal IC design team in Canada. Our team provides leading edge serial interface (SerDes) solutions to Huawei worldwide. Work in an enthusiastic and motivated environment on the bleeding edge of technology with unlimited access to latest CMOS nodes and development software. The Hisilicon department is currently looking to hire Analog Design Engineers on a full-time basis for Huawei's Markham office.

Responsibilities

In this role, you will be working in a team environment conducting research and development into next generation high-speed interfaces and signal integrity systems (aka SerDes, PHY, HSS, wireline transceivers, optical transceivers) in deep submicron FinFET technologies. You will be joining the fast growing Toronto R&D center as part of the Canadian Research Center of Huawei Canada. Multiple positions are available at multiple seniority levels (Principal, Senior, etc.) depending on candidate qualifications.

You will be responsible for large analog and mixed signal systems, specification, design and layout. In this role you will coach and supervise more junior designers and physical layout. You will put into action your solid understanding of analog circuit design fundamentals, and demonstrate an aptitude for creative or advanced circuit design. You will utilize your strong experience in deep submicron CMOS and FinFET high speed mixed signal or RF design, as well as in one or more of the following: SerDes, equalization systems, RF front end, or PLL. You will also use your strong custom layout experience to supervise layout designers

Qualifications

- · PHD or MASc in Electrical Engineering or equivalent degree
- · PHD or 4 years + MASc of relevant experience in Analog/Mixed Signal design
- · Must have experience in deep submicron CMOS (28nm or below)

- • Experience in FinFET technologies is an asset
- • Experience in optical communication, silicon photonics, or package design is an asset
- • Must have experience in one or more of the following: ADC/DAC, SerDes, optical, high speed digital, RF, PLL design
- • Must have: recent hands on experience with Cadence tools and environment

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Distributed Data Software Developer

Seeking creative, driven developers to help create next generation scale-able, high-performance, highly available, elastic, distributed data storage systems for transactional and analytic applications in the cloud. The ideal candidates are software developers who have significant knowledge and experiences in creating scalable, high-performance algorithms. Other important attributes are versatility and a passion for building high-quality enterprise-class software systems.

Job responsibilities:

- Work with a team of architects and engineers to develop proof-of-concept systems and components.
- Analyze customer requirements and evaluate key technologies/alternatives to meet requirements
- Innovate ways to increase scalability and reduce cost of solution
- Write and maintain architecture and detailed design specifications.
- Perform design, implementation and code reviews.
- Review test specifications.

Key Skill-sets:

- Over professional and academic experience in complex software development products

- Strong C/C++ or GO development experience

- Experience designing, implementing and debugging multi-threaded (and/or multi-node) systems

- Ability to quickly understand + navigate large codebase

- Design and development experience in one or more of the following areas is ideal:

- distributed database (eg: Microsoft SQL Azure/AWS RDS Aurora/ Google F1 Spanner/Oracle RAC/IBM PureScale)

- storage system, file system, or cache system(eg. Aws EFS/Ceph/HDFS/GPFS/Gluster/pNFS/Alluxio/Redis/Memcached/Ignite)

- TCP/IP or RDMA layers for multi-node communication

- Elastic cloud services

- realtime applications with soft/hard latency requirements

- software performance analysis and optimization

- other data-synchronization heavy applications

The following traits are an asset

- open source community experience
- Excellent documentation, organization and communication skills.
- Team player
- Self-motivated & detail oriented.

GUI Tool Developer

Description:
Huawei is looking for a software engineer with strong background in complete GUI development – both UX and the backend. The ideal candidate will have extensive experience developing with graphical libraries on Linux platform.

Responsibility:
Main responsibility will be to design and develop a custom schematic design entry tool, similar to KiCAD or gEDA, to be run on Linux OS. As this will be a tool developed from scratch, based on the set of feature requirements, the candidate will be responsible to propose and justify the choice of graphical library and overall design, and also develop the tool.

Job Requirements:
- 3+ years of strong GUI development experience
- Strong C/C++ programming abilities and software engineering skills
- Excellent communication and documentation skills
- Scripting experience with shell, awk, perl, etc. is a plus
- Understanding of digital design principles is a plus
- Good analytical skills.

Architect/Researcher for Human Computer Interaction

Job Description

Huawei Canada's rapid growth has created an excellent opportunity to build and grow your career and make a big impact to everyone's life. This position embodies the core customer-centric culture of the Huawei Company, and takes the vision and responsibility to "Make IT Simple, Make Business Agile". Would you like to make a dent in the world of technology? Join us to shape the future of mobile devices with the combination of human computer interaction & AI. We are looking for talented people to join us with the following responsibilities and qualifications:

Responsibilities

- Participate HCI research and product development projects, to build core software competitiveness for Huawei mobile devices.

- Work with researchers from across Canada as well as collaborators from partner companies to define the next generation mobile UI.

- Design cutting-edge UI+AI solution and transfer research results to commercial mobile products.

Qualifications

- Preferably has a PhD degree in Human Computer Interaction (HCI)/Graphics/related areas
- Industry experience with a good understanding of mobile UI/interaction design
- Strong communication skills (good at communicating with both academics and industry people)
- Basic understanding of AI and ML
- Interested in cross-domain research and has the ambition to change the world
- · Work ethnics: responsible and reliable

Junior Compiler Developer

Description:

Huawei Canada's rapid growth has created an excellent opportunity to build and grow your career and make a big impact to everyone's life. This position embodies the core customer-centric culture of the Huawei Company, and takes the vision and responsibility to "Make IT Simple, Make Business Agile".

The position belongs to the Canada branch of the Programming Technologies Lab of Huawei, whose mission is to innovate and leverage programming technologies (compilers, languages, language VMs, tools) to improve the performance, productivity, and quality of Huawei software.

As a member of a highly talented team, you get to do creative work as well as making real impact by solving real customer problems. While the current projects include language design, compiler & JVM, and performance optimization, the lab continues to grow and expand into new domains (e.g., cloud, smart devices, IoT). As such, we are not looking for people w/ a fixed set of skills, but rather the "growth-mindset" people who have a versatile experience in the field and are not daunted by acquiring new skills. We especially welcome researchers and problem solvers.

Responsibilities:

- Work involves a good amount of core compiler and language VM development, (domain-specific) language design, performance optimization across the system stack, and tools design.
- As a Sr Software Engineer, you are expected to proactively engage with customers to identify opportunities for novel programming technology solutions; bootstrap projects from scratch and turn ideas into prototypes and production; and to explore new areas and keep up w/ the latest programming technologies in the external community.
- Provide technical leadership and mentorship for a geographically distributed team of engineers.

- Last but not least, be creative and keep on learning.

Qualifications:

- Ph.D or Master in Computer Science or 5+ years of work experience in the relevant areas
- Expertise in one or more of the following areas:
  - **Programming language design**, with experience in a relevant area such as type systems, memory management, concurrency models, domain-specific languages, formal methods, or language standard committee; or
  - **Language implementation**, with experience in a relevant area such as compiler design & optimization, language VM, runtime and library, software verification, software engineering tools; or
  - **Performance analysis & optimization**, via experience in a relevant area, such as performance modeling, parallel software development, or processor or system simulator development.

- Fluency in C/C++/Java programming

Nice to haves:

- Because we develop programming technology for a variety of purposes, competence in a breadth of programming paradigms is a plus, such as imperative and functional programming, formal specifications and assembly code.
- Experience with runtime system, such as memory management and concurrent task scheduling, and in newer languages like Go, Rust, Scala, and Swift.
- Experience with developing programming technologies for the Cloud environment and smart devices (our new areas).
- Prior engagement in open-source projects, developers' community, and/or research community.

Machine Learning Research Scientist (Computer Vision)

Job Description

We are seeking a Research Scientist to help us implementing cutting-edge machine learning and computer vision techniques that may benefit hundreds of millions of users of Huawei's products and services.

The Huawei Toronto Research Center offers you the opportunity and resources to accomplish your technology innovation dreams. Huawei Canada's rapid growth has created an excellent opportunity to build and grow your career and make a big impact to everyone's life. This position embodies the core customer-centric culture of Huawei, and takes the vision and responsibility to "Make IT Simple, Make Business Agile".

Responsibilities

- Apply machine learning and computer vision techniques to large-scale video analytics and video understanding problems

- Explore next generation computer vision solutions

- Implement and develop proof of concepts.

Qualifications

- MS or Ph.D. in Computer Science or a related technical field
- Strong understanding of computer science fundamentals (Data Structure / Algorithm)
- Software development experience in C++ and Python
- General knowledge of machine learning, computer vision and image/video processing.

Nice-to-haves:

- Experience with applying machine learning or computer vision to real-world problems
- Experience with TensorFlow, or other deep learning tools

Software Engineer – Autonomous Driving Technologies (1 Year Contract)

Job Description

Based in Toronto (Markham), the Canadian division of Huawei's Cognitive Computing Lab is responsible for developing key technologies in artificial intelligence and cognitive computing. Through internal collaboration with other Cognitive Computing Labs in Huawei Global labs, and external collaboration with leading research institutions in Canada and the US, we innovate at the leading-edge of machine learning, computer vision, and robotics.

Responsibilities

Under the supervision of the Project Manager and Team Lead, you will be responsible for:

- Software design & deployment
- Troubleshoot, debug and upgrade existing systems
- Integrate software components into a fully functional software system
- Deploy programs and evaluate user feedback from researchers
- Software development documentation

Qualifications

- Imaginative individuals with creative thinking whom are highly motivated and excited by the future of artificial intelligence;
- BS or MS in Computer Science or Engineering and related fields
- 1+ years of software development experience
- Experience working with one or more of the languages: Python, C/C++, Java, Javascript, etc, ROS an asset
- Working experience with Git or similar, Linux environment preferred
- Advanced communication skills

Software Developer – Performance Optimization Job Description

Huawei is looking for an experienced Senior Software Developer with hands on experience in performance analysis and tuning, and strong background on variety of hardware architectures. Successful candidates should possess a built in desire for innovation and invention. Likewise, candidates should be highly adaptable who can thrive in fast-paced environments.

Responsibilities

Main responsibilities include the analyzing existing software application or middleware framework, pinpointing its bottleneck, optimizing its performance, figure out the opportunity of using different software and hardware architecture to improve the performance. Candidate will also be responsible for designing and building prototypes to demonstrate the performance difference between different solutions.

Qualifications

- Masters or PhD degree in Computer Science, Compute Engineering, or equivalent with minimum 8 years of experience
- Strong C/C++ programming abilities and software engineering skills
- 5+ years of experience on software and system performance analysis and tuning
- In depth knowledge on variety hardware architectures including CPU, FPGA, GPU, DSP and ASIC
- Experienced on programming on different hardware (GPU & FPGA) using OpenCL, CUDA etc.
- Familiar with open source framework/middleware like Spark, Hadoop, Storm, Tensorflow and Caffee.
- Strong knowledge on cloud and virtualized environments
- Strong background in heterogeneous computing using hardware acceleration
- Excellent communication and presentation skills (Internal & External)
- Strong research and analytical skills
- Experience in one or more of the following is an asset:
    - o Strong background on cloud infrastructure and virtualization technologies
    - o Familiar with Cloud and OpenStack
    - o Experience in one or more domains using hardware acceleration