



Job Descriptions
in Huawei Moscow Research Center (MRC)

We are waiting for your CV*

(please send it in English)

Email: rrihr@huawei.com

Email Subject: City + Department (e.g.: Moscow CRI)

Department: CRI – Central Research Institute

Job Title	Responsibilities	Requirements
Computer Vision Researcher	<ul style="list-style-type: none"> • Conduct cutting-edge research in model quantization and acceleration, low-level image processing, video enhancement and related deep learning algorithms • Develop solutions for products with verification and validation of algorithms • Coordinate internal R&D activities with other divisions, documentation and presentation of results 	<ol style="list-style-type: none"> 1. PhD degree in statistics, machine learning, computational mathematics, numerical optimization or a highly related area with solid theoretical foundations and/or good research papers accepted to related high level conferences 2. Industrial/academic experience in (one or multiple areas) Computer Vision, Machine Learning/Deep Learning, Data Science, as well as experience in applying academic studies to industrial applications 3. Deep learning frameworks experience: TensorFlow, Keras, Torch, Caffe, Theano etc. 4. Familiar with recent state-of-the-art in Deep Learning: CNN, RNN, GAN, Reinforcement Learning, Capsule networks etc. 5. Excellent communication and presentation skills in English
Speech and Semantics Researcher	<ul style="list-style-type: none"> • Conduct cutting-edge research in the field of natural language processing, speech recognition and synthesis, multimodal learning, knowledge graph and deep learning algorithms • Develop AI-enabled products and services with other teams in the company • Collaborate with world-class organizations in academia 	<ol style="list-style-type: none"> 1. Possess a PhD degree in computer science, statistics, applied mathematics, or have equivalent research experiences 2. Demonstrate the ability to generate new ideas and innovate 3. Have 3 years of academic or industrial working experiences in natural language processing, speech recognition and synthesis, multimodal learning, knowledge graph, deep learning, or related fields 4. Have strong programming skills, experienced in one or more programming languages including but not limited to: C/C++, Java, Python. 5. Well-established research track-record of novel algorithm research, e.g. peer reviewed conference papers in one or more of the following: NIPS, ICML, ACL, EMNLP, ICASSP, INTERSPEECH, or top mathematics conferences/journals
AI System Engineer	<ul style="list-style-type: none"> • Computational performance optimization of AI algorithms for CPU/GPU/NPU • Modification and implementation of algorithms on real hardware 	<ol style="list-style-type: none"> 1. PHD/MS in computer science, computational mathematics, electronic engineering, numerical optimization or a highly related area 2. 3+ years experiences in algorithm development 3. Experience in high-performance/distributed/parallel computing or embedded software 4. Good mathematical and algorithm experience 5. Strong understanding of modern CPU/GPU architectures and trade-offs, program analysis and optimization technique 6. Programming skills: C/C++, Java, Python (data structures and algorithms)

Department: CRI – Central Research Institute

Job Title	Responsibilities	Requirements
GNN Researcher	<ul style="list-style-type: none"> Algorithm research and development on Graph Neural networks Cooperation in graph neural network area with Universities in Russian 	<ol style="list-style-type: none"> Master's degree or above, major in math or applied math or computer Professional Knowledge <ul style="list-style-type: none"> Deep learning Linear algebra and matrix computations python and AI framework At least one paper published in Neural Network area, better in Graph Neural Network area
IP Network Researcher	<ul style="list-style-type: none"> Contribute to the network algorithm optimization and network modeling research team to work on the mathematical problems for future network architecture, protocols, and algorithms. Build models for networks and analyze it, with different requirements and conditions. Deduce an 'ideal solution' by simplifying some conditions as a 'limit' how a 'perfect' network could work in theory; Take the constraints in the real world into account, and analyze the best realistic methods on how to approach that 'ideal solution' with distributed mechanisms, to realize optimal goals. Study the network theory limitation with different services or scenarios, such as carrier networks, campus networks, data center networks, etc. With theory research result, support study of new architecture or mechanisms for network, such as addressing, routing, etc. to build better future network. 	<ol style="list-style-type: none"> PhD degree in Computer Science, Mathematics or Electrical engineering, etc. Have good knowledge of one or more below: Graph theory/Scheduling, queuing theory/Stochastic analysis/Probability theory/Game theory/Network calculus Have successful experience in a specific field (such as network field, other related fields can be used as a reference) with above mathematical theory or method Good at combining mathematical theories and engineering practice, analyzing problems from root causes, and solving problems using mathematical theories and methods Know the basic theory and development trend of IT technology, such as network or computer architecture, distributed database, Cloud/Edge computing, etc. With experience in network-related research is a plus, including but not limited to network architecture, network protocol, network algorithm, network modeling, AI, etc. Ability to initiate and develop new ideas and initiatives in collaboration with both external and internal partners.



Department: CRI – Central Research Institute

Job Title	Responsibilities	Requirements
Optical DSP Algorithm Researcher	<ul style="list-style-type: none"> Research and innovation in digital signal processing for fiber communication or optical sensing. Theory exploration, system modeling, advanced algorithm design, simulation and analysis. Working and communicating effectively in cross-function team and cooperate with academic/industrial partner. 	<p>Required qualifications:</p> <ol style="list-style-type: none"> PhD in Communication Engineering, signal processing, Lidar/Radar, remote sensing or other related fields. Familiar with theory and algorithms of digital signal processing. Familiar with Matlab, Python or other simulation tools. Having track record of academic publications or patents. Fluency in spoken and written English. <p>Desired qualifications:</p> <ol style="list-style-type: none"> Familiar with fiber communication system or telecommunication digital signal processing algorithms. Familiar with Lidar/Radar working mechanism, physical model of modules in Lidar/Radar system, or related sensor digital signal processing algorithms. Familiar with conventional or machine learning based optimization algorithm. Familiar with algorithm implementation and optimization targeting latency and power consumption.
Communication Theory Researcher	<ul style="list-style-type: none"> Research next generation communication system components, transmission technology. Write the corresponding technical reports and patents, publishing papers 	<ol style="list-style-type: none"> PhD degree; Major in radio physics, optics, partial differential equations, optimization theory, or machine learning. Familiar with at least one computer language
Wireless Technology Researcher	<ul style="list-style-type: none"> Conduct fundamental research for Post Shannon Transmission Systems for 6G. Develop theoretical framework and novel transmission systems for the future globally connected things with intelligence. File patents and publish papers in top IEEE/ACM journals and IEEE conferences Develop Simulation Software and Do Simulation Draft Algorithm Specification 	<ol style="list-style-type: none"> PHD degree or above, major in radar, signal processing, communication engineering, math, computer science Familiar with 5G/NR system. With publications on theoretical analysis of Information Theory/Commutation Theory/ signal Processing/Coding theory/ AI/ ML Has strong algorithm design, implementation and optimization capabilities



Department: CMI – Central Media Technology Institute

Job Title	Responsibilities	Requirements
Media Algorithm Engineer	<ul style="list-style-type: none"> Gain insights into industry-leading technologies and development trends in the media field, take customer application scenarios as assumptions, and focus on mathematics, classic algorithms and AI technologies required by media information flows to make continuous innovations and breakthroughs. Engage in the media field, including researching, innovation, and engineering implementation of image, video, audio, and ARVR algorithms, to achieve Huawei's leading technical competitiveness in the media field. Develop standards in the media codec(video, point cloud, audio, etc.) field and build leadership in standards and industry development. Build ultimate experience for end users based on basic media applications, such as mobile phone photography, video, ARVR, and voice enhancement. 	<ol style="list-style-type: none"> Master degree or above in artificial intelligence, computer science, computer photography, optics, electronics, signal and information processing, pattern recognition, biomedical engineering, automation, mathematics, etc. Have theoretical background and R&D experience in image/audio/video/3D data processing, deep learning, object recognition, computer graphics, SLAM, 3D reconstruction, scene recognition, intelligent voice, multimedia information search, optical design, and video protocol standard (HEVC/H264/VPx/VC1/MPEGx). Have solid programming capabilities, and be proficient in programming languages such as C/C++ and Python/Matlab.

Department: CHI – Central Hardware Institute

Job Title	Responsibilities	Requirements
Algorithm Researcher	<p>Research and development for:</p> <ul style="list-style-type: none"> Computational geometry methods for fast search on 2d layout Interactive single ended routing Incremental solving of geometrical overlap Single ended trace smoothing Differential pairs smoothing Development and support of C++ standalone libraries Testing and continuous integration. 	<ol style="list-style-type: none"> Master's degree or above in Pure Math or Computer Science Proficient in C++ for algorithm simulation and development, including object oriented programming, STL and templates Has strong solving skills and ability for independent research
Network Algorithm Researcher	<ul style="list-style-type: none"> Research and development of novel protocols/algorithms for High-Performance Computing (HPC) networks with emphasis on MPI performance and congestion control. In-depth study and analysis of problem scenarios that arise in HPC network environment. Development of HPC network simulation model. Participate in co-operation projects with Academia partners. 	<ol style="list-style-type: none"> Master's degree or above in Pure, Applied Math or Computer Science Proficient in C++ for algorithm simulation and development, including object oriented programming, STL and templates Has strong solving skills and ability for independent research

Job Title	Responsibilities	Requirements
OS Kernel Researcher/Developer	<ul style="list-style-type: none"> • Making sure system software stack is fast, efficient, and highly secure. This includes: • Performance and memory size analysis and optimization • Development of advanced features and optimizations in existing and new system software components (system libraries, runtimes, frameworks, kernel, etc.) • Development of other tools enabling software engineering / architectural innovations • Learn all the time. The company encourages attending international conferences and expects employees to stay on the cutting edge of technology. 	<ol style="list-style-type: none"> 1. Fresh graduated or working toward PhD degree in computer science-related discipline 2. Strong C / C++ knowledge 3. Strong knowledge of algorithms and algorithmic complexity theory 4. Experience of working in Linux environment; advanced knowledge of Unix command-line development tools 5. Knowledge of computer architecture principle 6. Experience in working on development tools / system software 7. Conversationally fluent English.
Compiler Researcher/Developer	<ul style="list-style-type: none"> • The Compiler team has an opening for a software developer/researcher to explore and prototype innovative binary translation technologies on ARM Architecture. You will take advantage of the latest CPU features, new HW features. We are developing a complex product that allows run traditional software on ARM servers 	<ol style="list-style-type: none"> 1. Strong C/C++ design and coding skills 2. 2+ years experience developing LLVM-based compilers 3. Strong background in Compiler Theory and Development 4. An independent and innovative thinker who communicates well and deliver 5. Graph Theory



Department: Hisilicon

Job Title	Responsibilities	Requirements
Mobile CPU Software engineer	<p>The main goal of this position is the research of CPU performance bottlenecks for mobile applications and games and development breakthrough solutions for mobile application accelerations. Your work may include:</p> <ul style="list-style-type: none"> Investigation of performance bottlenecks of mobile CPU/SoC for popular apps and games Design and implementation of compiler optimization passes to eliminate major bottlenecks (performance optimization, power consumption reduction) Co-design of compiler and CPU architecture/microarchitecture to improve CPU performance Modeling of hardware to find new performance optimization approaches and work on the requirements for CPU architecture and microarchitecture with design team 	<ol style="list-style-type: none"> Good understanding of computer architecture and micro-architecture Experience in development compiler and optimizing transformation <ul style="list-style-type: none"> Performance analysis and tuning of applications C/C++, Assembler (read and understands), scripting languages (Python/Ruby) PhD student or PhD degree defended within last 1 year <p>Desired skills and experience:</p> <ol style="list-style-type: none"> In-depth knowledge of ARM ISA, system architecture, microarchitecture Knowledge of Android ecosystem and Linux system design Experience in HW/SW co-design, ISA and system architecture definition Basic knowledge of machine learning approaches
AI Senior Research Engineer	<ul style="list-style-type: none"> Research in the field of AutoML for On-device Computer Vision Design, implement, evaluate and deploy models and agents Promote team competencies & growth Drive independent research resulting in patents & publications Present research results to business units 	<ol style="list-style-type: none"> Ph.D. or M.Sc. with 1+ years of industrial exp. in Computer Science, Mathematics with related topics Strong knowledge and interest of an area of ML/DL for Computer Vision Strong Background in one of the following topics: General Model Optimization or Compression/Quantization/Pruning/Distillation, AutoML or Reinforcement Learning Strong software design and implementation skills: Python + DL frameworks Confident knowledge of optimization methods & algorithms <p>Desirable additional skills:</p> <ol style="list-style-type: none"> Demonstrated ability to create innovations through publications & patents Background in the field of AutoML will be a bold plus
Wireless Communication Algorithm Engineer	<ul style="list-style-type: none"> Responsible for the research of advanced receiver algorithms on user side (5G / 6G cellphones, etc.), break through key technologies, propose high-performance, low-complexity estimation and detection algorithms (traditional or AI methods), and create a modem chipset with the best competitiveness in communication performance in the industry. Specific task includes, but is not limited to: Research and development of key algorithms for the 5G/6G baseband physical layer of mobile phone chipset, including algorithm research and analysis, protocol and demand analysis, algorithm design and selection, link development and simulation, performance verification and optimization, joint debugging support, troubleshooting and analysis, etc.; Frontier application research of "AI + Communication", tracking and proposing patents for 3GPP standard. 	<p>Major in Telecommunications, Radio Physics, Digital Signal Processing, Information Transmission, Electrical Engineering, Applied Mathematics, Statistics or equivalent with a special focus on signal transmission, receiving and processing technologies.</p> <ol style="list-style-type: none"> Good knowledge in Linear Algebra, Probability Theory and Statistics Knowledge in Standard data structures and algorithms Experience in complex systems modeling or simulation Programming in Matlab/Simulink or C/C++ or others Good verbal and written communication skills in English



Job Title	Responsibilities	Requirements
Researcher (Operations Research and Optimization)	<ul style="list-style-type: none"> Combinatorial optimization for scheduling, statistical models Research and development of new mathematical frameworks for bin-packing, graph optimization 	<ol style="list-style-type: none"> Background in pure math, applied math, system programming Professional Knowledge <ul style="list-style-type: none"> Combinatorial optimization experience or expert in some advanced math Some experience in any high-level programming language (Python, C++, Java, ...) Additional Requirement: Classic algorithm theory, deep knowledge of computer architecture
Researcher (Scheduling Algorithms)	<ul style="list-style-type: none"> Scheduling algorithms development for IaaS, PaaS Research and development for cloud modeling Improving code quality for existing approaches, algorithm optimization Assist the testing department to complete the code integration to product Write the corresponding technical documents and patents 	<ol style="list-style-type: none"> Background in pure math, applied math, system programming Professional Knowledge <ul style="list-style-type: none"> Classic algorithm theory, deep knowledge of computer architecture Proficient in any high-level programming language (Python, C++, Java, ...) Additional Requirement: Experience in clouds, distributed programming, storage systems, machine learning implementation
CDN Algorithm Engineer	<ul style="list-style-type: none"> Cooperate with CDN R&D team to work on technique problems for future CDN architecture and algorithms. Build models for CDN caching, protocol, encoding and scheduling, and analyze it with different requirements and conditions. Implement and optimizing models and algorithms in large-scale CDN systems. 	<ol style="list-style-type: none"> PhD or Master in Computer Science, Applied Statistics, Applied Mathematics, or another quantitative discipline. Have experience knowledge on machine learning or operations research, and skilled on one of Python/Java/Go/C++. Know the basic theory and development trend of IT technology, such as network or computer architecture, distributed systems, Cloud/Edge computing, etc. Have successful experience in developing and optimizing CDN or large scale networks.
Researcher (Data Compression Algorithms)	<ul style="list-style-type: none"> Research and development of data compression algorithms 	<ol style="list-style-type: none"> New grad or senior year student of computer science universities. Ability to read, understand and write code in C++ and Python. Ability to speak and understand English – both vocally and in writing. Professional knowledge <ul style="list-style-type: none"> Background in mathematics or algorithms. Competition programming experience. Familiarity with common encoding/decoding methods and lossless compression approaches.



Department: Cloud BU

Job Title	Responsibilities	Requirements
Database Kernel Engineer	<ul style="list-style-type: none"> Responsible for distributed database platform and product design, development and testing. Responsible for the industry-leading cloud-to-terminal kernel database development, based on operating system kernel technology to build high-performance, high-availability core competitiveness. Responsible for distributed database platform architecture design and long-term evolution, responsible for exploring new technologies in the field of database kernels and building long-term competitiveness. Responsible for the integration of AI ability into distributed database architecture, including DB for AI (big data analysis, data classification, regression analysis) and AI for DB (optimizer and executor engine with AI). Responsible for performance analysis and optimization of database kernel Write the corresponding technical documents and patents 	<ol style="list-style-type: none"> Master degree or above, major in compute science, communication engineering, software and mathematics, etc. experience in DBMS, OS, filesystem development . Proficient in C/C++ programming, familiar with Linux environment programming. Experience in using one or more general-purpose databases (MySQL, MariaDB, PostgreSQL, MongoDB, Cassandra, SAP Hana, Oracle, SQL Server, ChronosDB, etc.). Participate in MySQL, MariaDB, PostgreSQL, Clickhouse, MongoDB, Cassandra and other database open source community. Have coding experience of database field, familiar with SQL and storage engine .
Compression Algorithm Engineer	<ul style="list-style-type: none"> Algorithms development and optimization for Cloud BU Design, train, and optimize models for video codec and compression Integrate algorithms/models into cloud service products. Write the corresponding technical documents and patents 	<ol style="list-style-type: none"> Good programming at C/C++/python Solid background on mathematic, algorithm and ML. Working experience in algorithm development. Having some competition experience (like ICPC\IMO+IMC\IPhO\IChO\IOI\CTF); Familiar with common image encoding and decoding methods (such as JPEG, PNG, etc.) and video encoding and decoding methods (such as h264, h265, etc.);
Software Engineer	<ul style="list-style-type: none"> Maintenance/upgrade/optimization/ R & D Huawei Cloud Code Analysis framework/tools/algorithms. Responsible for static code scanning, code dynamic analysis, code property verification , automatic defect detection & fixing, intelligent problem diagnosis and repair and other code analysis services (e.g., code search, code syncing, library auto-upgrading) for the next-generation R&D process. We are building a software team to develop a set of open-source tools for programmers , including artifacts managers, CI/CD, build automatons , code analyzers, and many more. 	<ol style="list-style-type: none"> Be proficient in at least one or more mainstream programming languages such as C/C++, JAVA, JavaScript, Python, and Golang. With certain degree of software development capabilities and DevOps domain knowledge, proficient in using various software development tools



Department: Computing

Job Title	Responsibilities	Requirements
Algorithm Engineer	<ul style="list-style-type: none"> Responsible for the design, development, verification and delivery of one technical field in graph mining area, solve the industry problems in the field of graph mining, build best technical competitiveness in industry, the technical field of graph mining area include but not limited to connected components, triangle count, pageRank, closeness, personal pageRank, betweenness, maximal clique, Louvain algorithm, graph neural network and so on; Responsible for achieving the target of one algorithm modular in the project, i.e. build long-term competitiveness by designing/optimization, inventing/innovation on graph mining algorithm area with mathematical/theory breakthrough; Performance testing and optimization of algorithms; Responsible to cooperate with academic/industrial partner (university/institute/startup etc.) to work together on one graph mining algorithm field and delivery promising algorithm results to product; 	<ol style="list-style-type: none"> PhD degree; Familiar with distributed graph data processing framework, including but not limited to Pregel, Graphx, PowerGraph, etc., and experience in relevant code development; Experience in the use and development of graph database such as Cayley, Titan or Neo4j; Solid theoretical knowledge in graph theory, capable of applying graph theory to solve large-scale graph data mining problems end-to-end; Experience in graph mining algorithm with linear algebra language is preffer; Understanding deep neural networks, experience in using graph neural network to solve practical business problems. Strong programming skills with at least one of language C++/Java/Scala/R
Algorithm Engineer	<ul style="list-style-type: none"> Grasp the cutting-edge technology and development trends in the machine learning algorithm areas which you are responsible for; Responsible for the design, development, verification and delivery of one key algorithm field in machine learning area, algorithm field including but not limited to classification, clustering, tree, random forest algorithms; responsible for the analysis of algorithm performance bottlenecks and propose algorithm solutions to improve the algorithm performance; Responsible for achieving the target of the algorithm in the project, i.e. build long-term algorithm competitiveness by designing/optimization, inventing/innovation on algorithm with mathematical/theory breakthrough; Responsible to cooperate with academic/industrial partner (university/institute/startup etc.) to work together on the algorithm you responsible for. 	<ol style="list-style-type: none"> PhD degree; Understand the principles of big data algorithms, familiar with mathematical computing and common big data computing models in the industry, including but not limited to statistical models, matrix calculation methods, machine learning algorithm principles, and deep learning algorithm principles; Familiar with big data open source components such as Hadoop, Spark, Flink, and have high-performance programming experience; Familiar with one of programming language Scala, Java, C ++; Have good algorithm research and analysis abilities, can quickly analyze industry top conference papers.



Job Title	Responsibilities	Requirements
Data Compression Algorithm Research Engineer	<ul style="list-style-type: none"> Take part in lossless data compression area research and development trends to build industry-leading data reduction competitiveness for enterprise storage systems. Analyze existing lossless data compression approaches and algorithms for the ways of speed and compression ratio improvement. Contribute to design, development, verification and delivery of lossless data compression algorithms providing higher efficiency than existing analogs (by compression ratio and/or performance) Algorithms performance optimization. 	<ol style="list-style-type: none"> Deep knowledge in algorithms and data structures domain, strong skills in algorithmic problems solving. Be familiar with lossless data compression algorithms basics such as LZ compression, Huffman coding. Familiarity with modern compression algorithms such as LZ4, ZSTD is a plus Strong programming skills in C/C++. Knowledge of other data reductions technologies is a plus. Have experience of optimizing algorithms performance for target platforms (x86 and/or ARM) is a plus. Good communication skills, be able to communicate fluently in English. Enthusiastic about technology, forward-looking, innovative thinking and capability in implementation and delivery
Human-computer interaction (HCI) Algorithm Engineer	<ul style="list-style-type: none"> Take charge of algorithm research and prototype development in the machine-machine interaction field, including space gesture recognition, touch gesture recognition, voice control, and multi-modal HCI technologies. Be responsible for algorithm research, prototype development, and product-based delivery in the AI field, including online (digital ink) and offline (OCR) handwriting recognition, face detection, and tracking. 	<ol style="list-style-type: none"> Have a basic command of HCI interaction technologies, including gesture recognition, stylus pattern recognition, intelligent recognition of graphics and text, and remote collaboration. Be familiar with audio technologies, including audio feature extraction, understanding, and classification, KWS, ASR, TTS, NLP, voiceprint identification, and blind source separation. Image classification/segmentation, behavior recognition, and image enhancement speech; Participants of intelligent chatbot/enterprise screen/smart home/smart handwriting recognition projects. Have a background in computer vision and graphics, and be familiar with image segmentation algorithms, semantic segmentation algorithms, and face detection and tracking algorithms. Familiar with common machine learning algorithms and deep learning. Experience in CNN or RNN networks. Have a good command of C/C++ and Java programming languages. Experience in Android development.
Software Trust Algorithm	<ul style="list-style-type: none"> Take part in security research and development trends to review the security solutions of enterprise storage systems. Track the latest development of the cryptography in the industry and the state of art in the security design of the data storage industry. Select/Design new algorithms to improve the efficiency and effectiveness of our security solution in the cases such as key distribution and data compression after encryption. Algorithms performance optimization. 	<ol style="list-style-type: none"> PhD in CS, EE or Mathematics. Recently got PhD degree (e.g. from 2019 year) or going to get PhD degree in up to 2022 year. Deep knowledge in cryptographic algorithms, strong skills in algorithmic problems solving. Strong programming skills in C/C++. Knowledge of other security algorithms such as multiparty computing, privacy protecting algorithms (e.g., k deterministic) is a plus Have experience of optimizing cryptographic algorithms performance for target platforms (x86 and/or ARM) is a plus. Have experience of OS security and hardware security is a plus. Good communication skills, be able to communicate fluently in English. Enthusiastic about technology, forward-looking, innovative thinking and capability in implementation and delivery.



Department: DC – Data Communication

Job Title	Responsibilities	Requirements
Senior Software Engineer	<ul style="list-style-type: none"> Contribute to the development and maintenance of LLVM-based language server; Develop services and components for IDE used by developers for C/C++ programming; Implement different refactoring features according with customer needs; Contribute important bug fixes and patches to open source community; Profile, analyze and optimize the created software; Collaborate with internal and external team members to solve complex issues. 	<ol style="list-style-type: none"> Strong background in C++ development; Developing and maintaining LLVM framework based tools; Large-scale open source development; Knowledge of object-oriented development and design best practices; Experience in developing algorithms and working with complex data structures; Familiar with development tools architecture and design (IDE, toolchain, and debugger); Knowledge/experience of clangd language server is a plus;

Department: T&A – Transmission & Access

Job Title	Responsibilities	Requirements
Java Software Engineer	<ul style="list-style-type: none"> Optical transmission network system planning, site design, network maintain application development and architecture evolution Design and develop scalable, re-usable and high-quality source code Participate in planning, implementation, testing and release activities Share and apply knowledge and best practices in a multinational team Research on new branches of technology to be implemented in the project 	<ol style="list-style-type: none"> Major in software engineering or related; More than 2 years work experience in Java programming. Experience in micro-service system, distributed computing, performance/resource optimization. Knowledge of Java, data structures, programming concepts and design patterns, relational databases Experience of git version control system Basic knowledge of Linux console



Department: Wireless

Job Title	Responsibilities	Requirements
RF Algorithm Engineering	<ul style="list-style-type: none"> Development of innovative algorithms for next generation Wireless (5G) telecommunication systems. Participation in development of system level architecture of radio transmitters and receivers, estimation of feasibility, analysis of risks and difficulties. Modern signal processing techniques in digital domain, mathematical modeling and correction of imperfection of analog devices (power amplifiers, up/down converters, local oscillators, passive intermodulation and antenna array). Building proof-of-concepts prototypes to evidently demonstrate the advantages of emerging solutions, development and delivery for integration to product Coordinating R&D activities, documentation and presentation of results 	<ol style="list-style-type: none"> PhD degree in Applied Mathematics , Radio Physics, Information Transmission or related major. Knowledge of mathematics (Matrix , statistics, regression, random processes, probability theory), familiar with deep-learning/neural networks and other nonlinear regression approaches. Stochastic and meta-heuristic optimization methods. Familiar with Matlab/Simulink and toolboxes (Digital Signal Processing, Communication, Filter Design, etc). Experience in algorithm implementation with C/C++/Python languages, interfacing with Matlab (mex files). Understanding FPGA/ASIC design flow, knowledge of DSP/CPU architectures or electromagnetic simulation Good verbal and written communication skills in English
Communication Algorithm Engineer (5G)	<ul style="list-style-type: none"> Be responsible for technology research and algorithm innovation, design, feasibility analysis, simulation evaluation, and delivery verification in the 5G and future communications fields, and be responsible for the end-to-end algorithm performance. Be responsible for PHY/MAC/RRM algorithm design, simulation analysis, and prototype verification. Be responsible for key technologies for future network deployment in the PHY and HighLayer domains. Be able to propose new ideas and ideas based on the applications of vertical industries. Be responsible for communication system technology research and system analysis and design. Be responsible for the research, design, verification, and delivery of mobile network AI, big data mining algorithms, cloud computing architecture, and solutions. 	<ol style="list-style-type: none"> PhD degree in Applied Mathematics Knowledge of mathematics (Matrix , statistics, regression, random processes, probability theory), familiar with deep-learning/neural networks. Stochastic and meta-heuristic optimization methods. Has strong algorithm design, implementation and optimization capabilities. Familiar with Matlab/Simulink and toolboxes (Digital Signal Processing, Communication, Filter Design, etc.). Experience in algorithm implementation with C/C++ languages, interfacing with Matlab (mix files). Good verbal and written communication skills in English.
Senior Software Engineer (5G)	<ul style="list-style-type: none"> We need algorithm engineer with deep algorithm and software background to improve the high-performance distributed computing efficiency of the next-generation wireless flagship 5G/5.5G base station products. We also need a team of people who work with engineers and managers in multiple technical areas around the world to achieve goals. 	<ol style="list-style-type: none"> PhD degree in Computer Science or Applied Mathematics with several years of work experience. Have a good command of the algorithm principles of operation optimization and be proficient in mathematical modeling based on business problems. Fully understand the application scenarios, application conditions, and software implementation complexity of the algorithm, and have project or research experience in solving application problems. Have a proficient command of the design and implementation of sequential, parallel, cache-efficient, external-memory, and write-efficient algorithms for fundamental problems in computing. Experience in models of computation, algorithm design and analysis, and performance engineering of algorithm implementations. Experience in C and C++.



Department: CBG Cloud

Job Title	Responsibilities	Requirements
Algorithm Engineer	<ul style="list-style-type: none"> Be responsible for the research and development of models such as machine learning, deep learning, and enhanced learning, including but not limited to basic algorithms or models, such as CNN, RNN, DNN, and DQN. Optimize basic algorithms or operators, such as model compression and convolution algorithm acceleration, to achieve ultimate performance. Use the preceding key algorithms and models to optimize the search recommendations in key scenarios such as Huawei video, Huawei music, application market, information flow, and negative screen. Improve the search recommendation conversion rate and business indicators to achieve the best in the industry. Search recommendation experience; Be responsible for the one-stop E2E AI platform, including intelligent annotation, feature engineering, model development, automatic learning and training, and reasoning, and support the competitiveness improvement of search, recommendation, computer vision, and NLP. 	<ol style="list-style-type: none"> Have the AI algorithm, big data algorithm, and data structure algorithm design and development capabilities. Be able to track cutting-edge AI technologies and track trends in the industry and apply algorithms. Have a good command of one of the Java/Python/C development languages. Have a good command of Hadoop open-source tools. Have at least one data mining tool and in-depth model training tool, such as Tensorflow, caffe, matlab. Have strong hands-on capabilities and be able to quickly implement ideas using algorithm programs. Have a sense of spirit and innovation that is impossible to challenge, and take the initiative to take responsibility for the challenges. Have a good team spirit and good communication skills. <input type="checkbox"/> Master degree or above in computer related field

Department: CBG software

Job Title	Responsibilities	Requirements
OS software Engineer	<ul style="list-style-type: none"> Research and development of managed language (Java and JS language) runtimes. Areas of interest include (but are not limited to) interpretation, automatic memory management, just in time / ahead of time compilation, tooling. Maintenance and tuning of existing language runtimes. Areas of interest include (but are not limited to) performance tuning and extending existing code base with new production-ready features. Responsible for implementation of video algorithms on mobile GPUs, identifying bottlenecks and proposing various ways to solve them Responsibility for the development of key parts of enhance image processing on real end-user hardware Researching new and applying the latest image/video quality evaluation technologies 	<ol style="list-style-type: none"> Bachelor or Master's or Ph.D., Excellent programming capability and mathematic capability; Good teamwork and intermediate English which can be as work language.





Department : GTS - Global Technical Service

Job Title	Responsibilities	Requirements
Big Data Engineer	<ul style="list-style-type: none"> The candidate will be responsible for investigating and surveying related research progress, development and implementation of processing algorithms, building world's leading high load and HPC solutions, and implementing the prototypes of the proposed solutions Testing performance and efficiency, development and integration of analytical tools, monitoring for different distributed processing platforms Presenting results to the company's product groups and at top conferences Learn all the time. The company encourages attending international conferences, and expects employees to stay on the cutting edge of technology. Collaborating with researchers from most famous Russian universities and research institutes 	<ol style="list-style-type: none"> PhD degree in a computer science related discipline Strong knowledge of algorithms and algorithmic complexity theory Experience of working in Linux environment; advanced knowledge of Unix command-line development tools Con conversationally fluent English. A language certificate is not required, but ability to pass an interview in English is a must. Experience in high load systems projects, parallel or distributed processing systems, Hadoop ecosystem, High Performance Spark, SQL on Hadoop
Operation Research Engineer	<ul style="list-style-type: none"> We are hiring researchers and research engineers in the related areas at all levels. The main goal of our lab is to build mathematical models and design high-performance mathematical optimization algorithms for business problems such as base station type planning and location selection, task-worker scheduling, resource network planning, and large scale mixed integer optimization. 	<ol style="list-style-type: none"> The candidate must have strong mathematical backgrounds. Candidates with the ability of mathematical modelling in the area of Graph Theory, Network Flow Optimization, Combinatorial Optimization, Mixed integer optimization, Large-scale optimization, Multi-objective optimization, and any other optimization related fields. Master any one of the following skills is a plus: Experience in network flow optimization, routing plan, integer optimization Having Rich experience in solving real-world large-scale optimization problems Having rich experience in optimization solvers such as CPLEX, Gurobi, CBC Having proved records, such as academic publications, patents, awards in competitions, etc.

Thank you!

**Please send us your CV in English to our HR Team's
email: rrihr@huawei.com**