Location	Job Title	Responsibilities	Requirements	Degree Qualification
Bristol	CPU Design Research Intern (Device Security)	• Innovate and evaluate ISA features for extensions to the RISC-V architecture, especially in the area of security. • Analysis of benchmarks and applications both statically and dynamically to assess the cost/benefit of any proposed architectural and microarchitectural features • Design and verification of proof of concept/reference implementations for new ISA features to assess the design complexity and help seed the eco-system for the proposed extensions. • Contribute to and engage with the wider RISC-V community to aid the adoption of new ISA features • CPU functional and performance modelling to help CPU architecture exploration and support software development.	Required: • Currently enrolled in a Master's degree or PhD in computer science, software engineering, robotics or any related fields at a university. • Strong mathematical/algorithmic problem-solving and software development skills (C/C++, Python, etc.). • Understanding of CPU architecture including ISA and assembly language. • Understanding of the fundamentals of CPU micro-architecture, such as pipelining, out-of-order execution, and caches. Desired: • Experience of processor modelling • Experience in compiler implementation and optimisation • Experience of firmware development • Knowledge of Random Test Generators tools/techniques • Knowledge of safety/security standards especially with respect to CPU design	All Degrees
Cambridge	Compiler Engineer Intern	Huawei compiler lab researches and develops latest compiler technologies to improve competiveness of Huawei's computing platforms, including server and HPC. We aim to enhance productivity and performance of compilers. We develop open source compilers (GCC/LLVM) and contribute to communities. We arm ourselves with knowledge from processor architectures, software optimizations to programming models. Key Responsibilities ● Develop LLVM/GCC based compilers ● Analyze & optimize performance of compiler generated code ● Use AI technology to help compiler optimize ● Design and implement compilers for GPU/CPU/DSP/AI; ● Explore the extreme performance optimisations. Research on innovative compiler technologies and SW & HW co-design for general CPU	● Passionate to develop compiler ● Advanced C/C++ programming skills ● Basic knowledge of CPU architecture ● Experience of contributing to open source projects ● Good at self-learning, courageous to explore new things, strong in practical skills ● Good communication skills and teamwork ● A current student study in Computing Science or related programmes; ● Have a good academic background and programming skills, published paper on top conferences or journals in the related fields (Preferred but not essential)	All Degrees

Cambridge	Research Interns in Mixed Signal Low Power IC design	Huawei is looking for potential interns in Analogue/Digital IC low power design related majors. If you are interested in event-driven IC design, PPA optimizaion and have some project experience or academic research achievements, we'd love to hear from you. You will work with industry-leading scientists, work on cutting edge systems research problems, build influence throughout academia and industry through technological innovations, and maintain contact and cooperation with both local and global research teams. Key Responsibilities: • Understand and analyse new and emerging technology trends in low power IC design related technologies including: WUR, event-driven circuit, etc.. • Design and implement key technologies and related algorithms, architecture . • Rapidly build and evaluate analogue schematic/digital RTL . • Actively participate in academia and industry	Required: • Enrolled in a Bachelors or Master's programme in EE/CS or a related technical field. • Have an in-depth understanding of analogue IC design and/or digital IC design and/or event-driven circuit. • Good silicon desiang skills, familiar with silicon design tools. • Good communication and teamworking skills. Desired: • Enrolled in a PhD programme in event-driven systems, etc. • Published papers in top journals/conferences. • Have experience in designing and developing event-driven system.	All Degrees
Cambridge	Digital Design Engineering Intern	As digital design engineer, the responsibilities include, but not limited to: • With the guide of system architect/algorithm, interpreting the concept of model into micro-architecture level or fixed point model for implementation purpose. • RTL implementation, verification • Mixed signal design verification • Working on technical documents such as design specification, micro architecture and simulation design.	Required: • Currently studying at least a undergraduate degree in relevant disciplines • Hands-on experience in RTL (mostly Verilog) and logic/physical synthesis • Skill for complex issue debugging and design verification. • C or Matlab. • Self-motivated, well organized and good team players. Desired: • Experience of Digital Signal Processing. • FPGA implementation/validation experience • Mixed signal design verification • Back-end ASIC design knowledge	All Degrees

Cambridge/London	GPU Software Internship	• Design and develop GPU architecture model. • Verify the function of the model and correlate performance with hardware. • Analyse the results and optimize the model to improve performance. • Build and maintain the tools for model debugging and simulation result visualization.	Required: • Currently enrolled in a Bachelor's or Master's degree with a focus in Computer Engineering, Computer Science or a related program. • Strong programming skills Desired: • Strong analytical skills • Creativity and ability to effectively communicate ideas. • Good understanding of rendering technologies and graphics pipelines • Experience in designing and developing complex software. • Understanding of CPU/GPU architecture principles. • Knowledge of graphics and compute API's (Vulkan, OpenGL, OpenCL, DX, etc.). • Good written and verbal communication skills. • Self-motivated, well organized and good team player	All Degrees
Cambridge	CPU Software Internship	1. Performance analysis and profiling of the Kirin in-house CPU architecture. 2. Gathering, analysing and presenting the results of the architecture profiling 3. Search for the performance and energy bottlenecks in system software, including OS and system libraries. 4. Improve DVFS policies for different heterogeneous components. 5. Analysis of the state-of-the-art technologies applied for improving performance/energy efficiency. 6. Research of new hardware extensions and software modifications to reduce the processor power.	Required: • You are currently enrolled in PhD in computer science, software engineering, robotics or any related fields at a reputable university. • Strong mathematical/algorithmic problem-solving and software development skills (C/C++, Python, etc.). • Understanding of CPU instruction set architecture and assembly language. • Proactivity and willingness to learn and explore new ideas. • Excellent communication and writing skills in English.	All Degrees

Cambridge/London	GPU Software Contractor	• Design and develop the GPU model. • Verify the function of the model and correlate performance with hardware. • Analyse the results and optimize the model to improve performance • Build and maintain the tools for model debugging and simulation result visualization.	Required: • BSc or MSc in relevant discipline • 2 or more years of experience in GPU driver/model or similar software development • Strong understanding of rendering technologies and graphics pipelines • Good knowledge of graphics and compute API's (Vulkan, OpenGL, OpenCL, DX, etc.). • Strong programming skills: C/C++, scripting. Desired: • Experience in designing and developing GPU/CPU model for a particular architecture. • Good understanding of CPU/GPU architecture principles. • Creativity and ability to effectively communicate ideas. • Good written and verbal communication skills. • Self-motivated, well organized and good team player	All Degrees
Cambridge/London/Edinburgh	CPU Architect & Tooling Generalist	Depends on the skillsets	Knowledge on Computer Architecture, C++/C/Assembly, Python, Modelling, e.g. Qemu, Gem5	
Edinburgh	Database System Researcher/Research Intern	We are looking to recruit people whose skills and interests include data storage/indexing/management systems, concurrent/parallel algorithms and data structures, distributed computing, graph theory, programming/query languages, fault-tolerant systems (especially transactional systems), and hardware-software co-design. Key Responsibilities: ● Perform systems research and empirical science on future database management systems. ● Analyse and understand requirements for the next generation of data storage and query processing engines. ● Implement key technical building blocks for the next generation of database management systems. ● Explore the latest database system frameworks for Huawei/Huawei devices.	● Have a solid computer science background. ● Be comfortable with research methodology. ● Be proficient in one or more system-level programming languages (C/C++, Rust, etc.). ● Possess a solid understanding of the internals of modern (transactional) database management systems. ● Be proficient in one or more of transactional and/or analytical database management systems, storage engines, indexing engines, concurrent/parallel algorithms and data structures, distributed computing, graph theory and graph algorithm design, programming/query languages, fault-tolerant systems (especially transactional systems), and hardware-software co-design (desired but not essential). ● Have participated in the implementation of (aspects of) a database management system or systems of a similar low-level nature (desired but not essential). ● Have published papers at top peer-reviewed conferences or journals in fields related to the above (desired but not essential).	All Degrees

Edinburgh	Indoor Positioning and Navigation System Research Intern	Working as part of the Huawei positioning & navigation team sums a spectrum of empirical computer science research and data driven solution engineering. This team in Edinburgh Research Centre is responsible for algorithm developing, prototyping and identifying opportunities to improve Huawei devices user's experience. Key Responsibilities: ● Evaluating and assessment of alternative indoor positioning & navigation algorithms for smartphones & wearables. ● Assisting in implementation of components to enrich data pipeline, working with Qualitative data, features engineering, data clustering, classification and dimensionality reduction. ● Support the research team in building automated testing and evaluation reports for key technical components. ● Contribute to the overall competence of Huawei's research and development of positioning and radio-map construction. ● Realise and procure innovations for the future development of positioning and navigation technologies.	Required: ● Knowledge of at least two of the following: 1) RF Signal Processing. 2) Data Regression / Augmentation. 3) Geomagnetic Map Construction. 4) RF SLAM / Crowd-Sourcing. 5) Machine Learning / Deep Learning. 6) Smartphone Indoor Navigation. ● Reasonable programming skills in at least one of: Java, Python or C++. ● Ability to discuss, evaluate and run algorithms developed by other team members. Desired: ● Relevant experience delivering innovations and R&D projects. ● Contributions to open-source projects related to qualitative data frameworks or pipelines. ● Previous experience in geospatial data science. ● Publications records in related topics.	All Degrees
Edinburgh	Programming Language Research Intern	● Research and development of high-performance languages: language design, high-level and low-level compiler optimisations, type systems, code generation. ● Investigating/researching technologies for heterogeneous architectures, AI frameworks, high-performance code generators. ● Benchmarking applications in a reliable and reproducible way on a wide range of hardware; identifying opportunities for compiler optimisations based on the obtained results. ● Collaboration with academia on programming-language-related topics, transferring results and ideas from academia to industry.	● Strong background in compilers/programming languages/type systems ● Experience with mainstream compilers like LLVM/GCC or with projects of a similar size and scope. ● Excellent programming skills in C/C++ and/or functional languages. ● Some familiarity with parallel and heterogeneous architectures and programming models. ● Publications in peer-reviewed computer science academic conferences/journals.	PhD

Edinburgh	System Infrastructure Research Intern	Huawei is looking for potential interns in computer-related majors. If you are interested in distributed systems, operating systems, cloud-native applications, machine learning and have some project experience or academic research achievements, we'd love to hear from you. You will work with industry-leading scientists, work on cutting edge systems research problems, build influence throughout academia and industry through technological innovations, and maintain contact and cooperation with both local and global research teams. Key Responsibilities: • Understand and analyse new and emerging technology trends in systems infrastructure related technologies including: distributed systems, operating systems and cloud computing. • Design and implement key technologies and related algorithms. • Rapidly build and evaluate software prototypes. • Actively participate in academia, industry and the open-source communities to build influence.	Required: • Enrolled in a Bachelors or Master's programme in Computer Science or a related technical field. • Have an in-depth understanding of distributed systems and/or operating systems and/or cloud computing and/or machine learning. • Good programming skills, master of at least one language, such as C/C++, Go, Python, Rust, etc. • Good communication and teamworking skills. Desired: • Enrolled in a PhD programme in distributed systems, operating systems, etc. • Published papers in top journals/conferences. • Have experience in designing and developing software such as containers, Kubernetes, the Linux kernel etc. • Committer or maintainer of well-known open source projects.	All Degrees
London	Research Intern in Computer Vision	• Working to solve challenges in 3D vision and computer graphics, computational photography, multi-modality learning, data efficient learning etc • Conducting cutting edge research in computer vision, especially focusing on deep learning • Collaborating with product groups in development of deep learning in computer vision technologies • Collaborating with external partners in academia • Participating in activities in academia and promoting the work conducted in the lab	List details of Knowledge, Skills, Experience and Qualifications needed to do the job: • PhD degree (preferred) in computer vision, or have equivalent research experiences • Have strong research track record. Have published in top tier conferences including CVPR, ICCV, ECCV, NeurIPS, ICLR, Siggraph; and journals including IEEE TIP and TPAMI, etc. • Demonstrate the ability to generate new ideas and innovate • Have established themselves in the research communities and/or in the industry	PHD Preferred

London	Research Intern in Reinfocement Learning	• Working to solve challenges in the field of reinforcement learning, probabilistic modelling, or risk-averse learning • Conducting cutting edge research in the field of reinforcement learning, probabilistic modelling, or risk-averse learning • Collaborating with product groups in development of reinforcement learning, probabilistic modelling, or risk-averse learning • Collaborating with external partners in academia • Participating in activities in academia and promoting the work conducted in the lab	• PhD in Computer Science or a related field • Strong research background demonstrated through journal and conference submissions in any of the following: ICML, NeurIPS, AISTATS, AAAI, UAI, IJCAI, JMLR, Annals of Statistics, and Annals of Probability • Hands-on Experience in implementing reinforcement learning, probabilistic modelling, and/or multi-agent algorithms • Ability to work in a diverse interdisciplinary team of researchers and engineers with different background	PHD Preferred
London	Research Intern in AI theory	• Participate in cutting edge research aiming to solve fundamental machine learning problems. • Design, implement and evaluate innovative solutions for data compression, few-shot learning and model selection problems.	List details of Knowledge, Skills, Experience and Qualifications needed to do the job: • PhD or MSc student in machine learning, or have equivalent research experiences. • Experience publishing in top tier conferences is a plus. • Experience in one or several fields related to the following topics: generative models, data compression, object detection, data-efficient learning, model selection. • Hands on experience using Python and deep learning libraries.	PHD Preferred
London	Research Intern in NLP	• Working to solve challenges in Machine Learning and Natural Language Processing, and collaboratively develop advanced products and services with other groups in the company. • Conduct cutting-edge research in the fields of Natural Language Processing, Speech Recognition, and Speech Synthesis and Deep Learning. • Develop AI-enabled products and services with other groups in the company. • Collaborate with world-class organizations in academia. • Participate in activities in academia, and promoting the work conducted in the lab.	• MSc or PhD student in NLP, Machine Learning, Computational Linguistics, or have equivalent research experiences • We will value any publication top tier conferences including ACL, NAACL, EMNLP, NeurIPS, ICML, ICLR, etc. • Prior experience or knowledge using Deeplearning frameworks such as Pytorch or Tensorflow and NLP frameworks such as Huggingface. • Demonstrate the ability to generate new ideas and innovate	PHD Preferred

London	Research Intern in facial analysis	• Working to solve challenges in face analysis including landmark detection, face detection, segmentation and recognition, face reconstruction, neural rendering, etc. • Conducting cutting edge research in computer vision, especially deep learning • Collaborating with product groups in development of deep learning in computer vision technologies • Collaborating with external partners in academia • Participating in activities in academia and promoting the work conducted in the team	• PhD degree preferred in computer vision, or have equivalent research experiences • Have strong research track record. Have published in top tier conferences including CVPR, ICCV, ECCV, NIPS, ICLR; and journals including TIP and TPAMI, etc. • Demonstrate the ability to generate new ideas and innovate • Have established themselves in the research communities and/or in the industry	PHD Preferred
London	Research Intern in Content Generation & NLP	• Work to solve challenges and conducting cutting-edge research in NLP and content generation (e.g. lyrics generation, automatic book writing). • Collaborate with product groups (e.g. Huawei Music, Huawei Books) in the development of content generation technologies for corresponding systems. • Build benchmarks/baselines using public datasets. • Dataset acquisition, cleaning, processing and augmentation. • Building ML/DL models with novelty, applicability, and practicality in mind. • Model evaluation and iteration. • Publish research papers at the top-tier NLP/ML/AI conferences or journals. • Carry out literature review and investigate the state-of-the-art frameworks or models for content generation systems.	• PhD degree preferred in Natural Language Processing with a focus on deep-learning models for Natural Language Generation. • Have strong research track record and have published in top tier NLP/AI/ML conferences including ACL, NAACL, EMNLP, EACL, NeurIPS, ICLR, AAAI, ICML, WWW etc; and top tier journals. • Demonstrate the ability to generate new ideas and innovate. • Knowledge of audio/midi processing is a plus.	PHD Preferred

London	INTERNSHIP : PRODUCTS, WEARABLES, FASHION & ACCESSORIES	• Support the team in creating, executing and communicating innovative ideas and concepts. • Research and survey trends in design, fashion, behavior, technology, etc. • Visualize design intents through 3D models or 2D visuals that are both aesthetically accurate and technically feasible. • Participate in team design reviews, share professional opinions and inputs. • Pro-actively seek f • or ways to create value for the team.	• You are a student at a design/art university in the UK. • You have already produced a strong body of work, both as part of your curriculum as well as for your own personal projects. • You have an interest, or draw influence from contemporary fashion, and/or new forms of 3D visual art. • Capable of visualizing your ideas in 3D (Rhino, Catia, Solidworks, Blender, Keyshot, C4D, Houdini, Marvelous, Grasshopper, Photoshop, Illustrator, etc). Good capabilities in hand-sketching are preferred but not mandatory. • You have interests and knowledges around a wide range of domains and disciplines (fashion, art, technology & science, psychology/sociology, manufacturing, engineering, A.I. creative tools, filmmaking, etc). • Have growing capabilities in information synthesis, strategic, systemic & critical thinking, and problem-solving. • A high level of self-motivation and initiative, and an eagerness to learn and work collaboratively.	Bachelor/Master
London	Research Engineer in Computer vision	• Working with the data scientists to research, develop, evaluate and optimize various problems in face analysis including landmark detection, face detection, segmentation and recognition, face reconstruction, neural rendering, etc. • Collaborating with product groups in development of deep learning in computer vision technologies • Deploying developed computer vision models on edge devices after optimization to meet customer requirements and maintain them to later improve to address additional customer requirements in future.	• MSc or PhD in Computer Science, Data Science, Machine Learning or in related fields preferred but candidates with Bachelor's degree in computer science are also welcome to apply provided they have a strong technical knowledge and experience in computer vision. • Understanding about depth and breadth of computer vision and deep learning algorithms. • Experience with any machine/deep learning frameworks like Tensorflow, Keras and PyTorch. • Experience in training models through GPU computing using NVIDIA CUDA or on cloud. • Ability to transform research articles into the working solutions to solve real-world problems. • Strong experience in using both basic and advanced image processing algorithms for feature engineering. • Proficiency in Python and related packages like numpy, scikit-image, PIL, opencv, matplotlib, seaborn, etc. • Excellent written and verbal communication skills for effectively communicating with the team and ability to presenting information to varied technical and non-technical audience.	Bachelor/Master

Ipswich	Software Automation Internship	• Support software test team activates, assist in supporting & improving current test software and developing new test modules for integration • Establish engineering test DoE's, data analysis and help compile reports • Help setup engineering test configurations, hardware and software • Opportunity to learn CAD & 3D printing to prototype new test jigs and setups	Required: • Must be eligible to work in the UK without restriction for the duration of the internship • BSc or higher degree in electronics, phyiscs or related science, with software control of hardware, have already completed at least one year of degree. • Software skill such as C#, C++, LabVIEW, Python, Java, etc • Demonstrable knowledge/experience of software and control of hardware. • Demonstrable knowledge/experience of data analysis. Skill using MS Excel. • Flexible attitude to working hours. • Excellent English communications skill-written and oral. • Minimum internship duration of 9m Desired: • Academic knowledge/experience in optoelectronic devices or testing • Electronics testing or hardware design • Arduino software and hardware projects • Solidworks CAD & 3D printing	BSc or Higher Degree
Ipswich	Reliability & Failure Analysis Internship Intern	• Support Reliability test activates: assist in execute and measurements of burn-in, validation and qualification for a range of optoelectronic devices. • Data Analysis, review and reporting to reliability engineers. • Hands on failure analysis using internal resources and tools. • Root cause identification.	Required: • Must be eligible to work in the UK without restriction for the duration of the internship • BSc or higher degree in physics or related physical science, electronics, communications, have already completed at least one year of degree. • Demonstrable knowledge/experience in the testing and measurement of optoelectronics devices. • Demonstrable knowledge/experience of data analysis. Skill using MS Excel. • Flexible attitude to working hours. • Excellent English communications skill-written and oral. Desired: • Academic knowledge/experience in III-V semiconductor optoelectronic device in the following areas, i.e. design, simulation, fabrication, reliability and/or failure analysis principles and methods; • Software skill such as LabVIEW, Python, Minitab, etc.	BSc or Higher Degree

Ipswich	R&D Test Internship	• Support R&D Test Team activates: assist in execute test request to support development of new optoelectronic devices • Data analysis, review and reporting to R&D team • Assist & hands on experience on rig setup, operation, maintenance & trouble shooting • Opportunity to learn CAD & 3D printing to apply on improving rigs and/or prototyping new rigs	Required: • Must be eligible to work in the UK without restriction for the duration of the internship • BSc or higher degree in physics or related physical science, electronics, communications, have already completed at least one year of degree. • Demonstrable knowledge/experience in the testing and measurement of optoelectronics devices. • Demonstrable knowledge/experience of data analysis. Skill using MS Excel. • Flexible attitude to working hours. • Excellent English communications skill-written and oral. • Minimum internship duration of 9m Desired: • Academic knowledge/experience in III-V semiconductor optoelectronic device in the following areas, i.e. design, simulation, fabrication and/or testing; • Software skill such as LabVIEW, Python, Minitab, etc.	BSc or Higher Degree