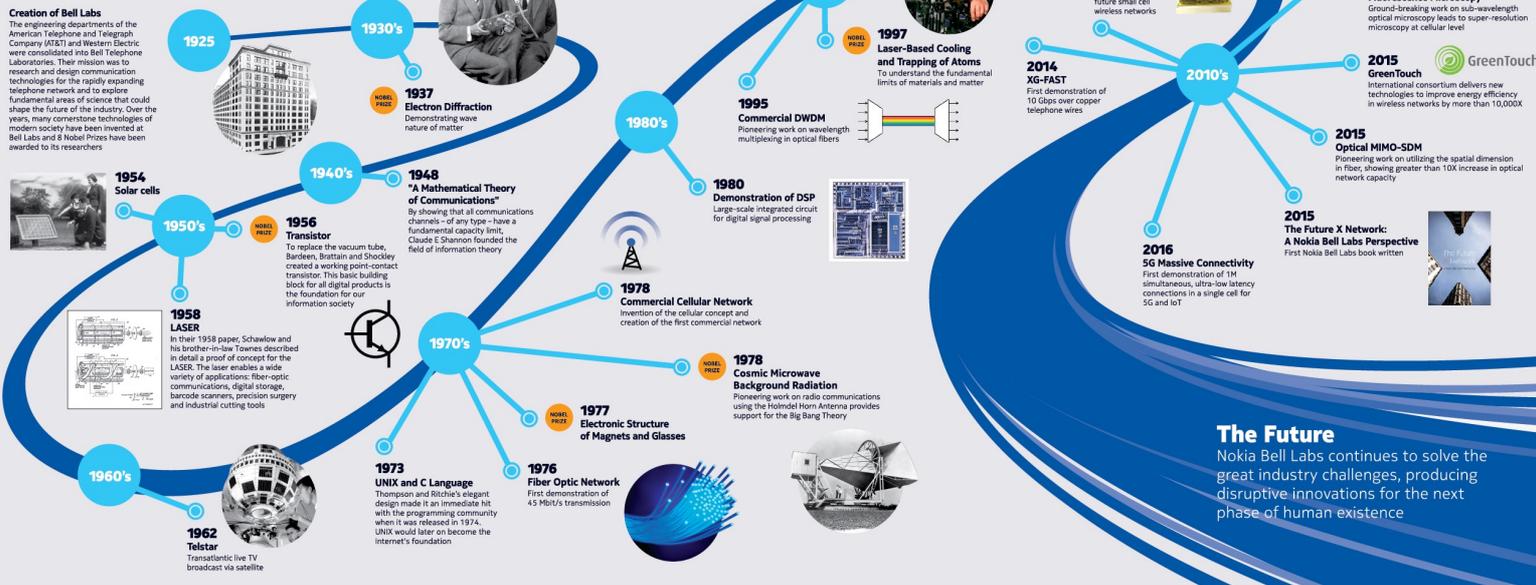


# Inverting the Future X Network

## Creation of Bell Labs

The engineering departments of the American Telephone and Telegraph Company (AT&T) and Western Electric were consolidated into Bell Telephone Laboratories. Their mission was to research and design communication technologies for the rapidly expanding telephone network and to explore fundamental areas of science that could shape the future of the industry. Over the years, many cornerstone technologies of modern society have been invented at Bell Labs and 8 Nobel Prizes have been awarded to its researchers



**The Future**  
Nokia Bell Labs continues to solve the great industry challenges, producing disruptive innovations for the next phase of human existence

## RESEARCH INTERN POSITION

Pervasive Systems Research  
Nokia Bell Labs, Cambridge, UK

(w) Earable, IoT, Edge AI

**Nokia and Bell Labs**  
Nokia is a global leader in the technologies that connect people and things. Powered by the pioneering work of Bell Labs, our research and innovation division, and Nokia Technologies, we are at the forefront of creating and licensing the technologies that are increasingly at the heart of our connected lives. Nokia Bell Labs is internationally renowned as the birthplace of modern information theory, the transistor, the laser and the UNIX operating system.

**Bell Labs Cambridge**  
Bell Labs' research facility in Cambridge is a leading lab working in the areas of Mobile Sensing and Systems, Applied Machine Learning, Social Computing and Internet of Things research.

We have openings for 2020 summer internships for three months in our Pervasive Systems Department. Interns are being recruited for the following projects.

**Human Sensing with Earables**  
Study and design of novel applications for earables. Focus on behavioural analytics and human sensing, e.g., study of human face, stress monitoring.  
Skills Sought: Multi-modal sensing (audio, motion); Signal processing; Strong systems skills; Experience in sensing applications

**Computing around the Ear**  
Exploration of signal processing algorithms and prototyping of novel sensors and sensing techniques around the human ear.  
Skills Sought: Signal processing; Hardware prototyping skills; Multi-modal sensing (audio, motion); Basic ML understanding

**Battery-less Sensing and ML**  
Exploration of algorithms and system challenges for intermittent sensing and ultra-low-power machine learning.  
Skills Sought: Solid Embedded SW development; Hardware prototyping skills; Basic ML understanding

**Conversational Agent for Proxemic Interaction**  
Developing a context-aware, and self-managed conversational agent for spatial interaction in physical space.  
Skills Sought: Back-end programming; Distributed systems; Basic ML; Layer 2+ knowledge on WLANs

**Edge AI with Neural Accelerators**  
Exploration of algorithms and system challenges with neural accelerators for building edge-native AI systems.  
Skills Sought: Strong systems skills; Basic ML understanding; Embedded SW development

**Multi-Device and Multi-Modal Sensing**  
Study of the algorithmic and system challenges for building a collaborative sensing solution with wearables and edge devices.  
Skills Sought: Strong systems skills; Good understanding of ML

**Robust Deep Learning on the Edge**  
Exploring domain adaptation and transfer learning to improve the robustness of deep learning models on edge devices.  
Skills Sought: Solid understanding of ML; signal (audio/vision) processing; interest in solving practical ML challenges

**Apply Today!**  
Write to [Chulhong Min](mailto:chulhong.min@nokia-bell-labs.com) or [Fahim Kawsar](mailto:fahim.kawsar@nokia-bell-labs.com) stating your interest.  
[chulhong.min@nokia-bell-labs.com](mailto:chulhong.min@nokia-bell-labs.com)  
[fahim.kawsar@nokia-bell-labs.com](mailto:fahim.kawsar@nokia-bell-labs.com)

Closing date: 31 January 2020. Applications will be considered on a rolling basis.

