Research Scientist, Gesture and Activity Recognition

Boston, MA

Fitbit is the leader in the explosive market of health and fitness wearables. We empower and inspire our users to lead healthier and more active lifestyles with simple and delightful products.

Fitbit Research is world-class team of hacker-scientist-types who dream up, prototype, and deliver shipping products. We investigate a big set of problems from hardware development to embedded signal processing algorithms to data mining. Experimentation is critical. We work in a dynamic and collaborative environment where the goal is to learn things quickly, iterate fast, and make awesome products.

Your Role

You will push the boundaries of what can be measured or inferred using wearable computers and mobile sensors. You will have large responsibilities in generating or taking ideas and growing them into a final product. You will help prototype new hardware, perform analysis to determine what is interesting and useful in sensor data, design experiments to collect that data, and design extremely robust but lightweight algorithms that will run on mobile hardware. You will do a lot of experiments, often involving hardware and humans. You will work with a diverse group of technical experts in the research team to figure out hard problems and, ultimately, help ship products with the other engineering teams at Fitbit.

Qualifications

- Ph.D. in Electrical Engineering, Computer Science, Applied Physics, or a related field
- Research expertise in several of the following:
  - Inertial motion tracking and sensor fusion. For example, numerical integration of MEMS inertial sensors using strapdown inertial navigation algorithms. Fusion with GPS, computer vision or other aiding technologies using Kalman filter.
  - Activity Recognition. For example, classifying periods of walking, running, standing, sitting, and sleeping in a computation-constrained and power-constrained mobile platform (e.g., ARM)
  - Gesture Recognition. For example, tracking and segmenting motion trajectories into discrete gestures, performing recognition or classification algorithms on the gestures to determine user intent.
- Hardware and sensor design. For example, prototyping new sensors and development platforms to find novel and interesting pieces of information for our users.
- Compelling interactions for wearable technology. For example, developing novel gestural or sensor-based interactions that delight the user and promote efficient communications.

Experience with experimental design and human data collection.
Familiarity with prototyping devices and algorithms.
3 or more years of work experience preferred
Experience with programming and scientific computation (Matlab, Python, and/or other C/C++ languages). Numerical programming for embedded targets a big plus.
Motivated, independent, efficient and able to handle several projects
Friendly, articulate, and interested in working in a fun, small team environment

Apply via the website:

http://www.fitbit.com/jobs/search#apply/oljb1fwA