Visoont AB (visoont.com) is an early upstart in Uppsala focusing on robotic vision for visual impairment. There is no flashy office, but a chance to make a real difference for people with disabilities. In order to get a job after the project, you should be excited about pitching for investors together.
Charging batteries in handheld devices for blind users
Needs a master thesis student to design the best power management system for handheld assistive devices, that can be used without seeing.

- Finding the charger
  Maybe using a visual marker, reflector, relief wall sticker...

- Charging internal batteries
  Without wasting too much power on standby
  Can’t have tangled power cords going into tiny holes

- Keeping track of the remaining power
  Can’t use light to display information

Passing criterias

- Getting the project done
  Feature prioritization is an important skill if you want quality
  Don’t underestimate the time needed to write your thesis

- Summary of prior art
  Being inspired by open research gives you a significant head start
  Not knowing existing solutions can lead to patent infringement

- Description of new method
  How is it unique?

- How the new method could be improved
  Planning ahead prevents a project from stalling without ideas

- Get a blind or blindfolded test subject to perform the tasks
  Can always fall back on something simpler if it doesn’t work
Required skills for the project
- Electronics
- Linux
- Usability testing
- Decent Swedish or English

Desired skills for future employment (if we get investors)
- Embedded systems
  Atmel, Broadcom
  SPI, UART
- Testing, simulation, validation and verification
  Better to make something work than something awesome that doesn’t
- CE marking of class I medical devices
- Own experience of past or present disability
- Overintelligence
  You cannot be overqualified for this company
- High performance image processing
  C/C++
  ARM NEON intrinsics
  Digital signal processors
- CAD design
  Low weight yet high durability
  Non-stigmatizing aesthetics

Send an e-mail with ”Battery thesis” in the title if you are interested
Why are you interested and are you the best applicant for this project?
E-mail: david.piuva@dawoodoz.com